

JULY 25, 1955

Increasing America's "Standard of Living" . . . p.41

RAILWAY AGE

One of Five Simmons-Boardman Railway Publications

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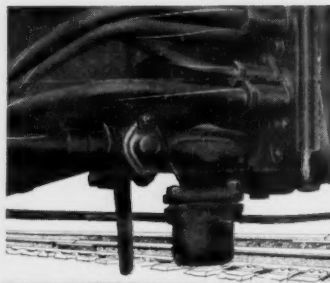
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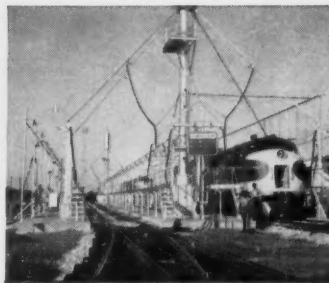
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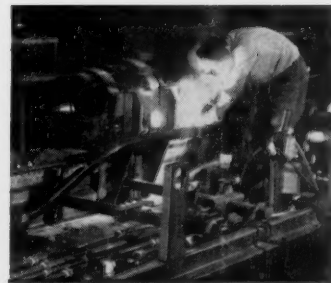
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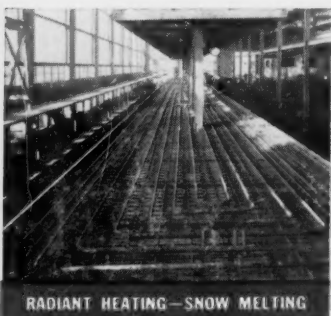
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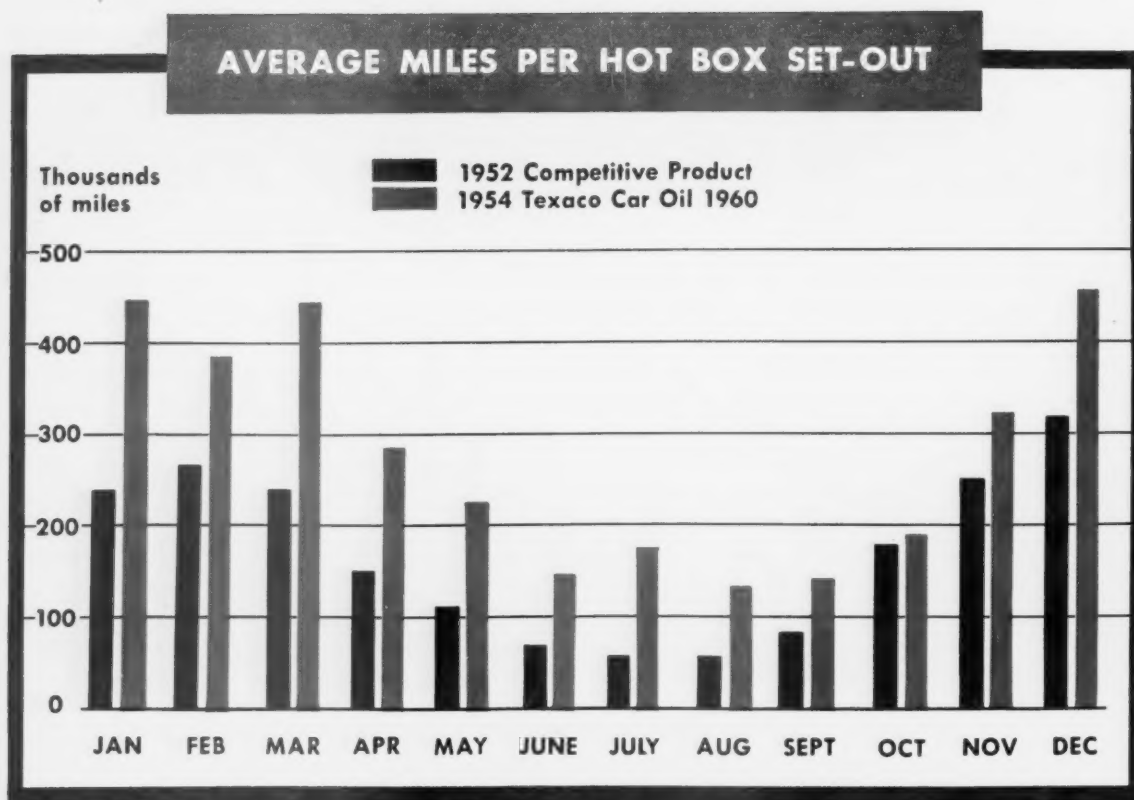
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THE hot box record graphed above was made by a Class I railroad. By changing to *Texaco Car Oil 1960*, hot boxes were reduced from 19,130 in 1952 to 9,517 in 1954. At a minimum estimate by recognized authorities of \$200 per hot box, this resulted in a saving to this road of some \$2 million a year.

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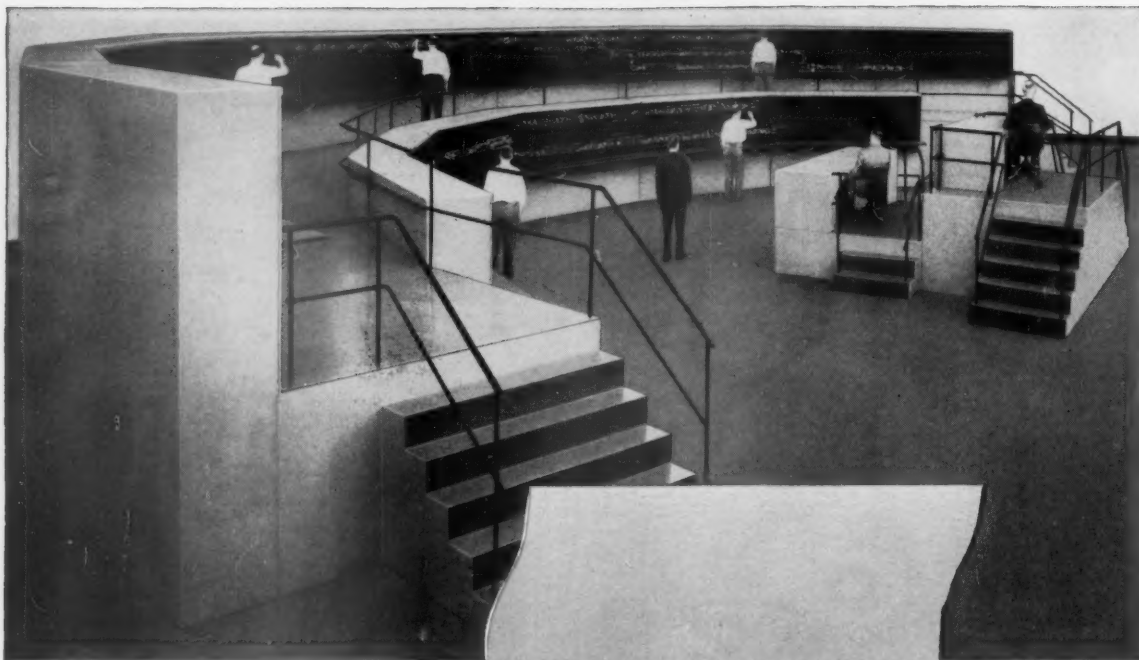
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July 25, 1955

Vol. 139, No. 4

Week at a Glance

A leasing arrangement for heavy construction and maintenance-of-way equipment is now available through Morrison Plan, Inc. 8

"Unconstitutional" is the Nebraska Supreme Court's verdict on the controversial "union shop" amendment to the Railway Labor Act. 10

An individual per diem rate for each car-owning railroad is proposed by Susquehanna Chairman Henry K. Norton; he calls it an equitable means of settling intra-industry differences on the question. 11

FORUM: One way to increase America's standard of living would be to adopt the proposals of the "Cabinet Committee" report, which would reduce the total cost of transportation by allowing more freedom of competition and thus directing traffic into the most economical channels. 41

The SP makes communications pay—in economy and better service—through widespread mechanization. 42

The Electrical Section's work tempo is up, as automation on railroads becomes more and more the responsibility of electrical engineers. 46

To reduce fire losses, the Erie uses an intensive program of employee training. 48

Terminals for "TrucTrains," built by the Pennsylvania, include some special features for handling this relatively new type of traffic. 49

A composition car floor—Plastinail—is being applied to 132 cars by the Union Pacific. 64

BRIEFS

The car-supply hearing before a subcommittee of the



How to switch 2½ million motorists to railroad travel

This year there will be over two billion travelers who are potential rail passengers. These are the motorists who will drive more than 520 billion miles in inter-city driving. This passenger potential is not wishful thinking—but sound facts and figures from the AAR and ICC.

If just one-tenth of 1% of this potential is converted to rail travel, railroads will benefit by an additional two and one-half million passengers! And it can be done.

Many motorists risk the hazards of long highway trips and endure the fatigue of driving because... they need a car at their destination.

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The Hertz Rail-Auto Travel Plan is one of the most aggressive, most successful ways to convert motorists into rail travelers and increase your passenger revenue.

Hertz has been promoting the Rail-Auto Travel Plan since 1927. In 1955, Hertz will spend more than \$1,200,000 in national magazine advertising to help sell this Plan. Of course, it is also to your advantage to promote the Plan in your own general advertising, timetables, highway overpasses—wherever you can.

To help promote the Rail-Auto Travel Plan, Hertz will install (on concession) in your railroad depots a rent a car booth or direct line "Call A Car" phone

to the Hertz downtown office. These facilities will provide a car immediately for those passengers arriving at the terminal and enable departing passengers to make car reservations at their destination points.

Hertz also provides free of charge 3¼ inch plastic signs neatly printed with these words: *reserve your Hertz rent a car from your ticket agent.* These signs clamp on your ticket agents' window grills, can be mounted on glass, or set on counters.

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Department D75, 218 South Wabash Avenue,
Chicago 4, Illinois; phone: WEbster 9-5165.

Current Statistics

Operating revenues, five months	
1955	\$3,945,223,671
1954	3,790,720,476
Operating expenses, five months	
1955	\$3,000,869,341
1954	3,060,775,802
Taxes, five months	
1955	\$ 420,321,221
1954	363,844,808
Net railway operating income, five months	
1955	\$ 420,797,314
1954	263,278,188
Net income, estimated, five months	
1955	\$ 329,000,000
1954	172,000,000
Average price railroad stocks	
July 19, 1955	95.09
July 20, 1954	69.02
Carloadings, revenue freight	
Twenty-seven weeks, 1955	18,651,393
Twenty-seven weeks, 1954	17,071,388
Average daily freight car surplus	
Wk. ended July 16, 1955	8,421
Wk. ended July 17, 1954	96,198
Average daily freight car shortage	
Wk. ended July 16, 1955	13,781
Wk. ended July 17, 1954	455
Freight cars on order	
July 1, 1955	27,102
July 1, 1954	13,860
Freight cars delivered	
Six months, 1955	17,111
Six months, 1954	23,602
Average number of railroad employees	
Mid-June 1955	1,075,084
Mid-June 1954	1,073,847

RAILWAY AGE IS A MEMBER OF ASSOCIATED BUSINESS PUBLICATIONS (A.B.P.) AND AUDIT BUREAU OF CIRCULATIONS (A. B. C.) AND IS INDEXED BY THE INDUSTRIAL ARTS INDEX, THE ENGINEERING INDEX SERVICE AND THE PUBLIC AFFAIRS INFORMATION SERVICE. RAILWAY AGE, ESTABLISHED IN 1856, INCORPORATES THE RAILWAY REVIEW, THE RAILROAD GAZETTE, AND THE RAILWAY AGE GAZETTE. NAME REGISTERED IN U. S. PATENT OFFICE AND TRADE MARK OFFICE IN CANADA.

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Week at a Glance CONTINUED

Senate Committee on Interstate Commerce will be held July 27. The hearing is expected to be in the nature of a conference with interested parties—like those held by the committee in previous years (*Railway Age*, July 18, page 11).

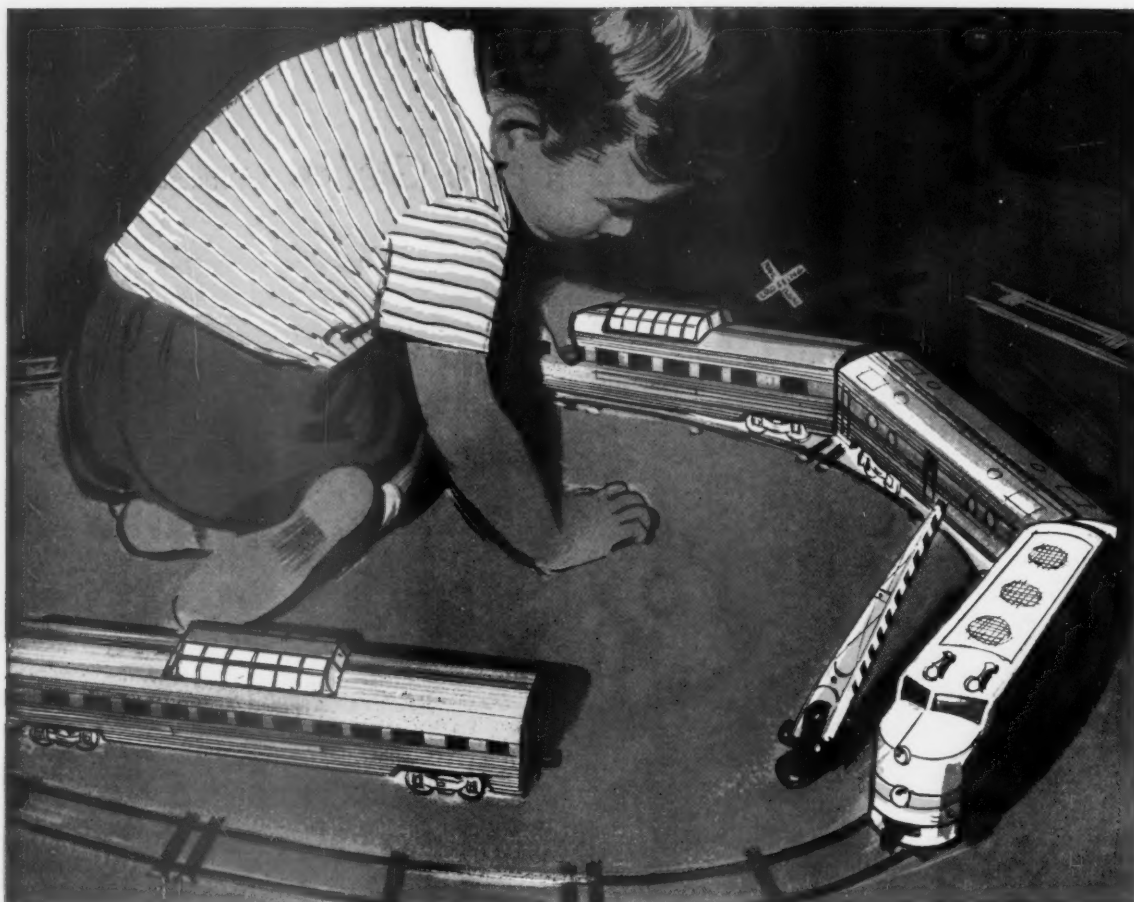
No transport bills on its calendar will be acted upon at this session of Congress by the House Committee on Interstate Commerce. The pending bills include those designed to implement recommendations of President Eisenhower's Cabinet Committee on Transport Policy and Organization, which will not get a committee hearing this year.

An aluminum spike was driven a few days ago by CNR Vice-President Dingle to mark the official opening of that road's new Kitimat extension in British Columbia. Other new lines into the undeveloped Manitouwadge area of northwest Ontario and into Quebec's Chibougamau areas, already are under way, and "there will probably be others."

Overnight service for lcl freight has been established by the Louisville & Nashville between Louisville and Birmingham. Shipments received by 3 p.m. at the freight house in one terminal are placed at the other in time for next morning delivery. Several intermediate points benefit from the service speed-up.

A two-fold attack on the current freight car shortage has been launched by members of the Mid-West Shippers Advisory Board. The board's central car efficiency committee, after a special meeting in Milwaukee on July 14, is urging members to crack down on car detention by both shippers and receivers. It is also urging increased loading per car "to make at least five cars do the work of six."

The Georgia & Florida Magazine is a newcomer in the group of railway employee publications. The first 16-page issue was produced under the direction of Rita H. Crout, editor, whose office is in Augusta, Ga.



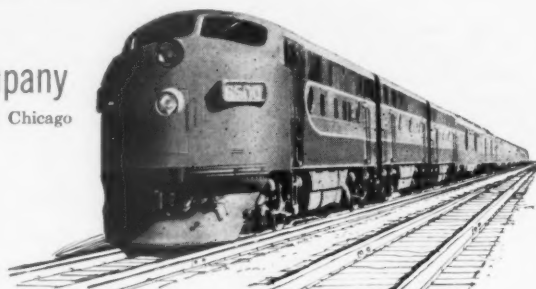
A railroad that doesn't use Adlake equipment? Sure—this one!

But even *this* railroad is influenced by ADLAKE PRODUCTS. That Dome car, for example, is modeled after the revolutionary designs using Adlake Dome Windows that have put a new "see" into sight-seeing.

It's true we don't make equipment for model railroading, but *every* major American railroad uses the famed Adlake "Breather" windows. And if you take inventory on any railroad, you're sure to find Adlake hardware, luggage racks, curtains, switch locks, signal lamps, lanterns and other specialties for the railroad industry. We're proud of the customer friends we've made in our 98 years of growth with America's railroads!

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Manufacturers of ADLAKE Specialties and Equipment for the Railway Industry

Fast Write-Offs Spurred Car Buying

AAR's Seder so advises Congressional investigators of tax relief provided for accelerated amortization of defense facilities; Humphrey urges tighter program in future

A. R. Seder, vice-president of the Association of American Railroads, said last week that the "fast amortization" program directly influenced the purchase of freight cars and other new railroad facilities needed to help meet transportation demands of possible mobilization.

He testified at a Congressional hearing where Secretary of the Treasury Humphrey had appeared previously to express his view that fast-amortization arrangements of the future might well be confined to direct defense items; and that proposals to include other facilities be closely scrutinized.

The fast amortization program is the plan whereby tax relief is allowed to permit the write-off of certified defense facilities over a period of five years. Messrs. Seder and Humphrey appeared at hearings before a subcommittee of the House's Government Operations Committee which is investigating the matter. Their testimony followed that of Director Arthur S. Fleming of the Office of Defense Mobilization, and Commissioner Owen Clarke of the Interstate Commerce Commission (*Railway Age*, July 18, page 7).

Orders Would Drop—"There can be little doubt," Mr. Seder said, "that to cancel the amortization program at

this time would at once result in a falling off of car orders below what they otherwise would be and thus retard, rather than further, the interest of national defense.

The AAR vice-president pointed out that the plan of amortizing the cost of a facility over a period of five years instead of over its useful life does not lessen the amount of income subject to tax. It was intended "to defer, but not to forego, the payment of taxes," he explained.

Members of the subcommittee, which is headed by Representative Molloy, Democrat of West Virginia, have been critical of the fast-amortization program's failure to result in a net addition to the car fleet. Mr. Seder conceded that car buying has not been all that was hoped for, but he cited the railroads' poor earnings.

On that score, A. H. Gass, chairman of the Car Service Division, who supplemented Mr. Seder's presentation, said: "Give the railroads adequate revenues and you won't have to worry about the car situation."

No Common Purse—Mr. Gass also emphasized that, though freight cars are "pooled," there is "no common purse" with which to buy new cars. He added that roads with relatively

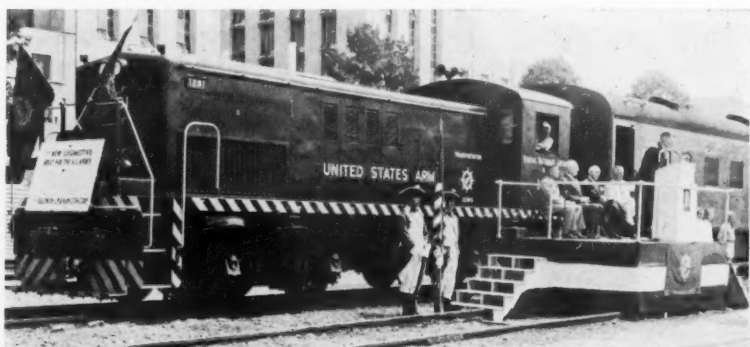
good earnings have been buying cars. As to the earning outlook, Mr. Seder said things are now looking up, but he warned that, unless the Ex Parte 175 rate increases are made permanent, the situation with respect to new car orders "could easily revert to what it was during the depression of the 'thirties'."

Asked by the subcommittee's counsel, Jerome Plapinger, if he favored government aid to railroads in order to "spruce up" the rate of return, Mr. Seder said he did not. He favored changes in regulation which would give railroads the rate-making freedom they need to compete with other transport agencies.

Mr. Plapinger was also interested in Mr. Seder's view as to the proportion of the freight-car fleet that should be available for defense. The AAR vice-president's answer was: "When the emergency arrives, 100% of the fleet is available to the government." Representative Younger, Republican of California, asked if Mr. Plapinger were suggesting that the railroads should maintain idle cars for government use. Counsel's reply was that he has "not yet" made any such suggestion.

Stockpile—There was also discussion of proposals that the government "stockpile" freight cars for defense needs. This idea was opposed by Messrs. Seder and Gass. The former predicted that such a government-owned fleet would not be stockpiled in normal times, but would be forced into use to earn rent from the railroads while some of their own cars were idle. Noting that freight cars are of many types, Mr. Gass raised a question as to what types would be built for the government stockpile.

Meanwhile, Mr. Seder had told Representative Griffiths, Democrat of Michigan, that he didn't think the "real basis" for the fast-amortization program was to produce a stockpile of cars. He thought it was to build a "potential" for an emergency. In this connection, Mr. Gass gave detailed figures on the consist of the present fleet, noting how supplies of car types most in demand have been maintained and even increased. The important question is "what kind of a fleet do you have when the bell rings," Mr. Gass added.



THIS NEW-TYPE LOCOMOTIVE was built to Army specifications by the Baldwin-Lima-Hamilton Corporation (*Railway Age*, July 18, page 13). On the speaker's stand (above), at the July 14 presentation ceremonies in Washington, D.C., are, left to right: Maj. Gen. Paul F. Yount, Army chief of transportation; W. T. Faricy, president, Association of American Railroads; Frank H. Higgins, assistant

secretary of the army; George A. Rentschler, B-L-H chairman; and Maj. Gen. Robert M. Littlejohn (ret.), affiliated with the International Fact Finding Institute. The 48-ton experimental locomotive is diesel-powered, with a mechanical hydraulic transmission. It was designed to fill an Army requirement for a locomotive using a minimum of materials usually in short supply during emergencies.

FREIGHT CARS

13,365 New Freight Cars Ordered; 3,015 Delivered

New freight cars ordered in June totaled 13,365, compared with 3,041 in May and 1,139 in June 1954, the American Railway Car Institute and

the Association of American Railroads have announced jointly.

Deliveries of new freight cars in June accounted for 3,015 units, the announcement said, compared with May deliveries of 4,083 new cars. The backlog of freight cars on order and undelivered on July 1 was 27,102, compared with 16,886 on June 1 and 13,860 on July 1, 1954. A breakdown by types of cars ordered and delivered in June, and of cars on order July 1, appears in the following table:

Type	Ordered June '55	Delivered June '55	On Order July 1 '55
Box—Plain	6,600	1,678	13,710
Box—Auto	0	0	200
Flat	200	12	1,162
Gondola	630	345	1,466
Hopper	3,200	43	3,684
Covered Hopper ..	1,285	288	2,460
Refrigerator ..	100	89	503
Stock	0	0	300
Tank	1,242	426	2,987
Caboose	3	9	181
Other	105	125	449
TOTAL	13,365	3,015	27,102
Car Builders' ..	10,249	1,690	15,819
Company Shops ..	3,116	1,325	11,283

The Canadian National has ordered 1,950 freight cars. Eastern Car Company will build 1,000 50-ton steel-sheathed box cars; Canadian Car & Foundry, 500 50-ton box cars and 200 70-ton high-side drop-end gondola cars; and National Steel Car, 250 50-ton box cars.

The Chesapeake & Ohio has ordered from its own shops at Russell, Ky., 1,000 70-ton hopper cars. The cars—first big lot to be constructed new by the C&O in its company shops—will be built at an estimated rate of 10 a day, with the entire order scheduled for completion about the end of this year.

The Chicago & North Western has ordered 2,075 freight cars at a cost exceeding \$14,100,000. Pullman-Standard will build 1,575 40-ft 50-ton box cars and General American will build 500 gondola cars. Deliveries from both builders are scheduled to begin in November.

The New Haven has announced its intention to purchase 500 50½-ft, 50-

ton steel box cars equipped with roller bearings at a cost of \$4,000,000.

The New York Central has ordered 3,000 box cars from its subsidiary, Despatch Shops, at an estimated cost of \$23,000,000. Included are 1,500 40½-ft cars with 8-ft doors, and 1,000 50½-ft cars, of which 500 will have 8-ft doors and the other half 15-ft doors. In addition, there will be 500 specially equipped 50½-ft damage-free cars, of which 200 will have 8-ft doors and 300 will have 15-ft doors. Deliveries are scheduled to begin in November and be completed next spring.

The Virginian is placing orders for materials for 500 55-ton steel hopper cars to be built in its Princeton, W. Va., shops beginning in the second quarter of 1956.

SPECIAL

New Plan Announced for Leasing Work Equipment

A new method of equipment leasing, announced by Morrison Plan, Inc., will enable users of heavy construction and railroad maintenance-of-way equipment to lease various types of equipment, although produced by different manufacturers, in one transaction.

Under the plan, a railroad or heavy construction contractor who needs different kinds of equipment—but who also does not want to tie up working capital, or tie up capital in equipment which may become obsolete within a few years—can arrange to lease all of it through a system of monthly payments. The prospective user selects the equipment, Morrison Plan purchases it for his use, and all the equipment is covered by a single lease.

Morrison emphasizes that, under its plan, rentals paid become an item of expense, which, from a tax standpoint, would be an advantage to the equipment user.

Need for the plan, Morrison said, was highlighted by a recent transaction

involving the Detroit, Toledo & Iron- ton, which needed various types of maintenance-of-way equipment but wanted to lease rather than purchase. The DT&I and Morrison worked out a package lease agreement for modern equipment from five different manufacturers and the railroad filled its requirements.

The plan is the outgrowth of a formula developed by R. L. Morrison two years ago to lease freight cars on a monthly-rental basis at a per diem cost less than a railroad would have to pay to get cars from the AAR pool (*Railway Age*, June 22, 1953, page 13). During the first two years, over 3,500 freight cars have been leased by short-line and trunk-line railroads.

LOCOMOTIVES

The New Haven has announced its intention to purchase 10 1,200-hp diesel-electric switching units for its New Haven-New York division.

The New York Central has ordered from Electro-Motive 61 diesel locomotive units, for delivery between October and December, at a cost of \$9,601,000. The order includes 16 900-hp yard switchers and 45 1,750-hp general purpose units, 21 of which will be equipped with steam generators for possible use in passenger service. Delivery of the new units will bring Central's total diesel horsepower to more than 2,500,000.

The Virginian has ordered six 1,600-hp diesel-electric all-purpose locomotive units from Fairbanks, Morse & Co. Deliveries are to begin in September.

Public Relations

Weeks Report Squabble "Hottest Little Donnybrook"

Controversy between railroad and trucking interests over the merits of the so-called "Weeks report" looms as "one of the hottest little Donnybrooks" in transportation history, according to Warren W. Brown, president of the Monon.

Mr. Brown told members of the Atlanta Transportation Club that railroads must unite in behalf of the report [of the Presidential Advisory Committee on Transport Policy and Organization] in what must become "one of the greatest demonstrations of industrial unity and determination in the annals of American business." Of attacks already made upon the report by trucking interests, Mr. Brown said: "If the American shipping public is to remain riddled by fear of restoration of a railroad monopoly, it seems to me it should be equally con-



A PERMANENT ART EXHIBIT is now maintained aboard the Chicago & Eastern Illinois' "Meadowlark" by the Danville, Ill., Art League. Here in the C&EI-built tavern-lounge car, passengers from Mt. Vernon, N.Y., admire a still life which forms a part of the current exhibit. The league renews its exhibit four times a year. League members are not distressed by the fact that the exhibition car is permanently assigned to a Chicago-Southern Illinois streamliner which does not pass through Danville at all.

cerned about creation of a private and contract carrier monopoly."

Today the trucking industry "can take away from a railroad practically any traffic it wants to handle," Mr. Brown continued. Acknowledging shortcomings in both freight and passenger rail service, he told the club that "the most skilled minds in railroading" are working on them, and that improvements have been made and will continue. "But within the framework of present conditions, this progress

must be slow and it has a limit. Short of some mild form of miracle, these things will never be just occasional human and mechanical failures; they will remain chronic service deficiencies. There is such a mild form of miracle in the Cabinet Committee report," he said, "and we are ready to wage a vigorous campaign on behalf of its adoption."

It's User's Decision—Whether proposals of the report are good for railroads or bad for the trucking industry

WARREN BROWN ANNOUNCES ANOTHER ESSAY CONTEST

In a July 15 address at Atlanta, Warren W. Brown, president of the Monon, announced a prize contest—to be supervised by *Traffic World* magazine—for the best essays for and against recommendations of the President's Cabinet Committee on Transportation. Terms and conditions of the contest are available from Mr. Brown or *Traffic World*.

A contest—in which *Railway Age* is cooperating with Mr. Brown—for the best essays on "Traditional Differentials in Railway Rates" closed at the end of March. Decision of the judges in this contest is expected soon.



STRAIGHT OUT OF HISTORY—THE SF&D

CALIFORNIA'S NEWEST RAILROAD shuns anything of this era. From its mansard-roofed station to its brass-bound team locomotives and wooden coaches, the Santa Fe & Disneyland is 19th Century throughout. Service began July 17 following ceremonies in which Fred G. Gurley, president of

the Santa Fe, California's Governor Goodwin J. Knight, and Walt Disney too part. The station forms the entrance to Disneyland, 160-acre amusement park at Anaheim, Cal., some 22 miles south of Los Angeles. Stations and trains are "ride-sized" — five-eighths full size.



LIKE A CURRIER & IVES PRINT, this scene depicts a stock train (which actually carries passengers) "in the hole" for the "flyer," whose derby-hatted engineer reflects the best traditions of post-Civil War railroading. Cars of the passenger train have been named for scenic attractions along the

prototype Santa Fe. The locomotives, "C. K. Holliday" (left) and "E. P. Ripley," have been named for former Santa Fe presidents. The trains carry visitors to various parts of Disney's "magic kingdom." Standard operating and safety rules apply on the 9,000-ft system.

is not the issue, he said. "The user of transportation must decide if it is good for his firm and good for its economic future."

Several alternatives present themselves, he continued. "One is to continue as we are and have the report go down to ignominious defeat in the midst of a very nasty squabble about what's right and what's wrong. I still cling to the idea that the best way for common carrier transportation to be preserved is for common carriers to get together and decide what protection they think they should have to keep an adequate common carrier system before the shipping public. Based on the makeup of certain organizations, that step is not now possible."

Rates & Fares

Hell Gate Arbitrariness Upheld by Commission

The Interstate Commerce Commission has upheld the 90-cent arbitrary charged for passenger service through New York City via the Hell Gate Bridge route.

The commission thus rejected the recommendation of Commissioner J. Monroe Johnson, who had called for termination of the charge in a proposed report (*Railway Age*, November 22, 1954, page 11).

Commissioner Johnson dissented from the commission's decision, and announced that Commissioner Alldredge joined in his dissent. Commissioners Clarke and Freas did not participate in disposition of the case.

The commission's report specifically held that relief from the fourth section's aggregate-of-intermediates provision is "presently warranted." The relief was originally granted in 1921 in F.S.A. 11452. This case was reopened in September 1953, later being

consolidated with No. 30953, which was an investigation instituted by the commission in 1951 into the lawfulness of the arbitrary. Both proceedings were discontinued by an order accompanying the commission report.

Respondents in the case were the New Haven, the Pennsylvania and the New York Connecting, owner of the bridge.

The commission report states that costs to the New Haven of transporting passengers over the Hell Gate route are equal whether they are

through or local passengers. "Insofar as only some passengers pay the Hell Gate toll charges," the report continues, "these charges are somewhat discriminatory, but not unjustly discriminatory."

The commission added that "because of the fine through service provided and the need of the rail carriers for ample passenger revenues, it is concluded that the existing charges of 90 cents one way and 180 cents round trip in excess of the aggregate-of-intermediate fares are justified.

tional guarantees are our assurance that the citizen will be protected in the right to use his powers of mind and body in any lawful calling.

"These rights should be only susceptible of restriction to prevent grave and immediate danger to interest which the government is obligated to protect. We find no condition to have existed at the time the amendment was adopted to authorize any restriction of these rights. Consequently we think Congress was without authority to impose upon employees of railroads in Nebraska, contrary to our constitution and statutory provisions, the requirement that they must become members of a union . . . as a condition for their continued employment. It improperly burdens their right to work and infringes upon their freedom. This is particularly true as to the latter because it is apparent that some of these labor organizations advocate political ideas, support political candidates, and advance national economic concepts which may or may not be of an employee's choice."

State Laws Struck Down—The court agreed with contention of the appellees that Congress, by the amendment, "did not merely repeal the restriction against union shops placed in the 1934 act, and thus permit private union shop agreements, but, in order to make union shop agreements effective in the 17 states that had restrictive laws against such agreements, which included Nebraska, struck down such laws; that, as a result thereof, every union shop contract entered into thereunder depends for its validity in the 17 states upon an act of Congress; and that, because every such contract involves governmental action, it therefore is subject to the due process clause of the Fifth Amendment."

The court termed the purpose of the amendment to get rid of "free riders"—employees who receive the benefits of collective bargaining but, because they do not belong to any union, do not bear any of its costs. "Assuming it would be reasonable to require free riders to pay their proportionate share . . . we do not think the means selected has any real and substantial relation to the object sought to be obtained.

"First, and primarily, because an employee's freedom of association—that is, the right to join or not to join a union—has no relationship to the object sought. Second, because by requiring him to pay initiation fees, dues and assessments, he is required to pay for many things besides the cost of collective bargaining."

"Exceeds Necessity"—The case was heard by Chief Justice Simmons and Justices Chappel, Carter, Messmore, Yeager, Wenke and Boslaugh. The opinion was written by Justice Wenke and concurred in in a separate opinion written by Justice Carter, with which Justice Simmons expressed accord.

Justice Carter said he failed to see "any relation whatever be-

Labor & Wages

Closed Shop "Unconstitutional"

Nebraska Supreme Court finds Railway Labor Act's union shop amendment violates two constitutional rights—Upholds district court's enjoinder of enforcing union shop pacts

Congress was without authority to impose the so-called "closed shop" provision of the 1951 amendment to the Railway Labor Act upon employees of railroads in Nebraska, that state's Supreme Court has ruled.

The amendment provides that employees "must become members of a union representing their craft or class as a condition for their continued employment." This, the Nebraska high court says, is unconstitutional in that it violates the constitutional right to work and the constitutional right of association.

The opinion was handed down in the case of *Robert L. Hanson, et al., appellees, V Union Pacific Railroad Company, appellee, Railway Employees Department, American Federation of Labor, et al., appellants*. The case was on appeal from the district court of Douglas county. It involves five non-operating employees of the UP, who, when notified to join a labor organization under provisions of a 1953 union shop agreement, brought suit to en-

join the carrier from putting the agreement into effect.

"We think the freedom of association, the freedom to join or not to join in association with others for whatever purposes such association is lawfully organized, is a freedom guaranteed by the First Amendment," the court stated. "We also think the right to work is one of the most precious liberties that man possesses. Man has as much right to work as he has to live, to be free, to own property, or to join a church of his own choice for, without the freedom to work, the others would soon disappear. It is a fundamental human right which the due process clause of the Fifth Amendment protects from improper infringement by the federal government.

"To work for a living in the occupations available in a community is the very essence of personal freedom and opportunity that it was one of the purposes of these amendments to make secure. Liberty means more than freedom from servitude. The constitu-



SUSPENDED TICKET COUNTER, soft pastel decor, air conditioning, panel lighting and extensive sound control highlight modernization of the New York Central's new city ticket office on Chicago's North Michigan avenue.

tween compelling union membership and enforcing payments by employees for benefits received from collective bargaining." He said that contributions can be compelled for representation required in securing benefits accruing to non-union employees as well as those belonging to a union; and that compulsory union membership exceeds the necessities of the case and compels an employee to join and support an association of persons with whose purposes and concepts he may be in total disagreement.

"To compel him to contribute to the support of economic or political programs adopted by the union, which may be abhorrent to him, is as constitutionally wrong as if similar programs were compelled by the employer. . . . An employee not only has the right to work, but he has the guaranteed right to have his earnings protected against confiscation against his will. Forcing an employee to join a union and compelling him to financially support principles, projects, policies or programs in which he does not believe and does not want, is clearly a taking of his property without due process," Justice Carter maintained.

Railroads Faced with Demands for Wage Hikes

Railroads are again faced with demands from unions for increased wage rates. Increases ranging from \$105 to \$142.50 a month are being sought by the American Train Dispatchers' Association, and unions representing other non-operating employees plan to demand an hourly increase of 25 cents.

O. H. Braese, president of the dispatchers' group, says dispatchers are slipping behind operating and other non-operating employees in wage-increase percentages and the new demands are to "partially correct" the "inequities." In demand notices sent to individual carriers, the union's general chairmen called "pattern" settlements "wholly inadequate" for the dispatchers.

Operations

Incentive Per Diem Plan Urged by H. K. Norton

A "road per diem rate for each individual car-owning road" is a proposal made to chief executives of a number of railroads by Henry K. Norton, chairman of the New York, Susquehanna & Western—to provide an adequate incentive to railroads, to induce them to retire old cars and purchase new ones.

The additional accounting involved in his proposal would be "trifling," Mr. Norton asserts. He goes on to say:

"The proposal is that all of the elements



SAFETY, SPEEDIER SERVICING operations and good advertising are features of a new platform lighting system installed by the Great Northern at its Havre, Mont., passenger station. Lighting units over the eight-foot platform at the right are suspended with the necessary power wires from a 7/16-in. guy strand. Poles are spaced 300 ft apart and there are 4 units in

each of the 5 spans. Bracket-type supports are used at the left, or station side, of the platform and also on the station. Beyond the station, at the left, the catenary type structure is also used. The entire installation employs 40 Line Material Spherolite luminaires and is designed to provide an average illumination level of two-foot candles.

of cost—with two exceptions—be calculated on an average as they should properly be under the present per diem formula (the word "properly" implies elimination of factors which have resulted in inflation of costs—involving especially the handling of account 314). Thus far there is no addition to present accounting practice which will not be required in any event and the result will apply uniformly to all railroads, as at present.

"The two items cited as exceptions are depreciation and interest. Depreciation would be based on the individual road's actual cost of its cars in service and would be at rates fixed by the Interstate Commerce Commission. Fully depreciated cars would be excluded. The interest charged would be in two parts—the first based upon the road's actual investment in its per diem cars as depreciated and the second, compensation for interest paid on outstanding balances of equipment obligations covering any part of its fleet.

"These two items would be compiled annually for each car-owning road by the Car Service Division of the Association of American Railroads and added to the average common factor mentioned above. The result would be a workable cost of ownership for each car-owning road.

"The item of the active car-day divisor would add one more process, as it does now. It has been the practice in recent years constantly to extend the number of years included in the active car-day divisor to include the depression years of the early 1930's. At that time there were some 417,000 more per diem cars than there were last year. Yet, these depression years and these non-existent cars have been used to reduce the car-day divisor and thus increase the per diem rate.

"This is one of the factors which has led to protests against the present system of fixing the per diem rate and to the litigation which now bedevils the industry and promises to continue to bedevil it until a

rational solution of the per diem problem is found. In the interest of reasonable accuracy, the actual ratio of active car-days for the entire industry for the second preceding year (assuming that figures for the preceding year would not be available in time) could be used in each annual compilation.

"This process would develop an individual per diem rate for each of the approximately 117 per diem car-owning railroads. These rates would then be listed on a single sheet and distributed to all railroads. Up to this point, the only additional accounting involved is the few days work each year in the Car Service office of the AAR. From this point forward, the only difference between the proposed and the present system would be that the billing clerk, in extending the debits and credits for each road, would use the rate listed on the AAR per diem sheet for the road billed instead of a single uniform rate. The additional time required to do this could hardly be measured. The billing machine itself could multiply one figure as easily and as rapidly as another."

Mr. Norton claims advantages for his proposal as follows:

"1. The inequities of the present system would be vastly reduced (no system based on averages can eliminate them entirely).

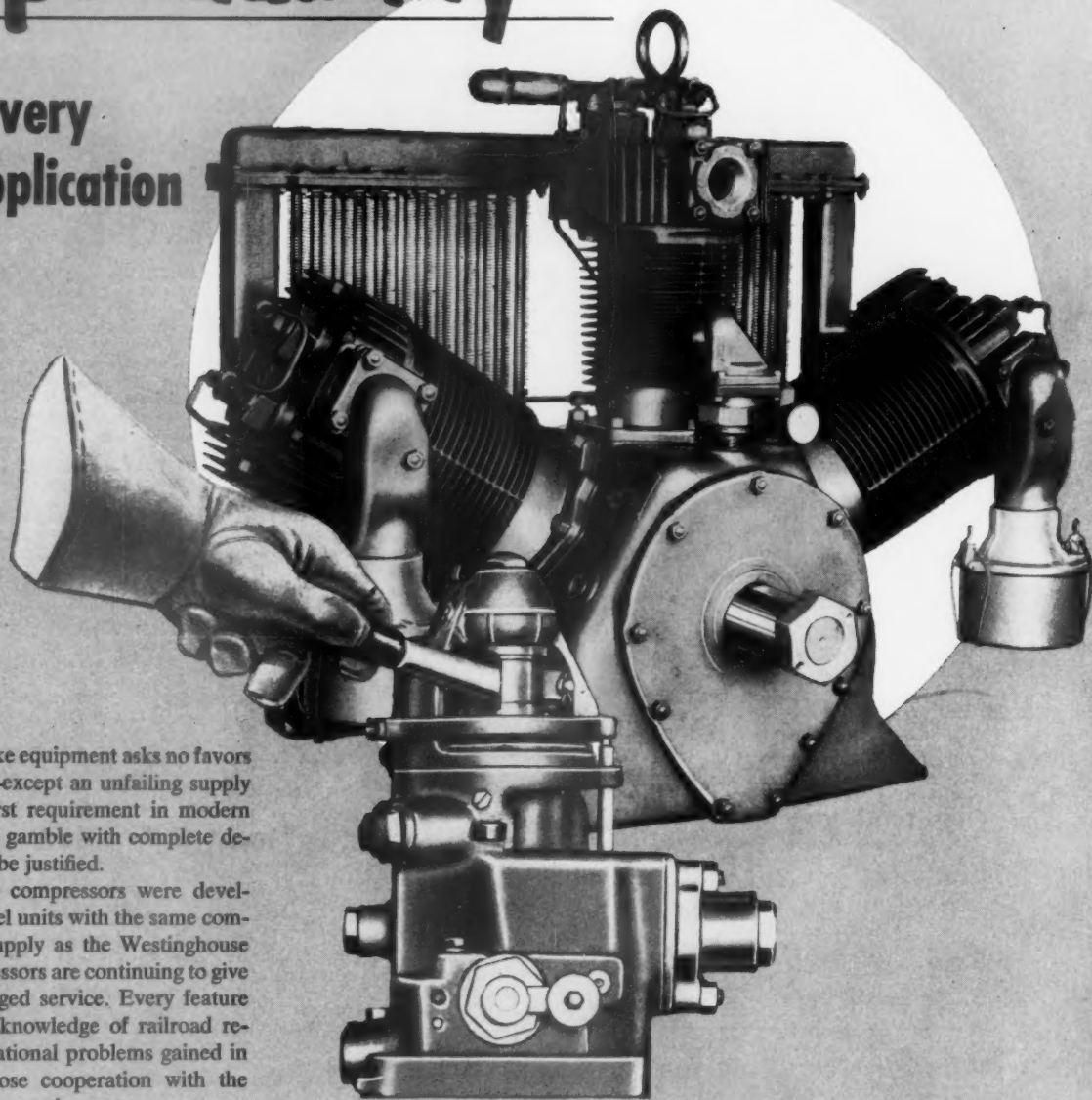
"2. The present litigation between groups of roads could be promptly settled and the prospect of further litigation, which is inevitable under the present system, will disappear.

"3. The use of a Road Per Diem Rate would remove the present incentive to retain old cars in service and substitute an incentive to purchase new cars. Every retirement of old cars would raise the owner's per diem rate. Every purchase of new cars would raise the owner's per diem rate. While these new cars would not be paid for directly, as such, the owner would re-

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dependability

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brake application



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Westinghouse CD compressors were developed to provide Diesel units with the same completely reliable air supply as the Westinghouse Steam Driven compressors are continuing to give through years of rugged service. Every feature reflects the intimate knowledge of railroad requirements and operational problems gained in over 80 years of close cooperation with the nation's leading transportation system . . .

1. Radiator-type intercooler between high pressure and low pressure cylinders reduces temperature of discharge air and increases efficiency.
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ceive compensation from the increased per diem rate which he would receive on his entire fleet.

"4. The Road Per Diem Rate would also make possible the purchase and inclusion in the industry's fleet of specially equipped, damage free, well cars and other special equipment, the lack of which is a serious detriment to the railroad industry in its competition with other forms of transportation.

"The proposal is made as offering a practicable means of bettering a condition which has proved a serious detriment to the railroad industry."

PRR Starts New Fast Train for Perishables

A new fast through train for moving perishable freight from St. Louis and Indianapolis to points in the New York and Boston areas has been introduced by the Pennsylvania. The new train, called "VL-2," provides second-afternoon delivery at New York and pre-dawn arrival at Boston the following day.

The train, hauling cars assembled from the west and midwest, leaves East St. Louis at 2:30 a.m., C.S.T. Cars are added at Indianapolis, with departure from there scheduled for 10:20 a.m. After reaching terminals serving the New York metropolitan area on the afternoon of the following day, cars for New York, Brooklyn, Jersey City and Newark are available for delivery that evening or early next morning. Boston cars are turned over to the New Haven by 4:40 p.m. and reach their destination at 4:15 the next morning.

Traffic

Hoover Group Didn't OK Defense Traffic Proposal

A subcommittee recommendation that an Assistant Secretary of Defense for transportation be appointed was not included in the Hoover Commission report on the "Business Organization of the Department of Defense" released recently.

The Hoover report, one of several made on reorganization of the government, called for creation of a separate Defense Department agency that would be responsible for non-combat supply to the services.

The subcommittee recommendation was summarized in an appendix to the report with several other recommendations not incorporated in the main body of the report. As such, it is still forwarded to Congress for its consideration but lacks the endorsement of the Hoover Commission.

The subcommittee which made the recommendation for the Assistant Secretary in charge of military traffic and transportation was headed by Perry

M. Shoemaker, president of the Lackawanna. The same recommendation by Mr. Shoemaker's task force was not included in a prior report on government traffic made by the Hoover Commission (*Railway Age*, May 9, page 23).

The summation of the subcommittee report as forwarded to Congress states that the defense transportation official should have "the necessary authority to direct all traffic management activities—passenger and freight—in the military services" including "rate negotiations and routing policy." He would have closer liaison with the Defense Comptroller and "enlarged budgetary power."

43 Roads Join in New Travel Credit Setup

A new rail travel credit card, issued by 43 different railroads and acceptable for meals and refreshments aboard trains as well as for transportation (except commutation) and Pullman tickets, has been announced by the Rail Travel Credit Agency, Chicago.

Earl B. Padrick, chairman, said the new card is "designed for the convenience of the regular traveler" and will be "issued both to companies for their traveling personnel and to individuals for personal travel."

"We feel that this new plan will be especially beneficial to business travelers and their companies," Mr. Padrick continued. "It reduces the risk and inconvenience of carrying large amounts of cash. It cuts down the necessity for cash advances by the company for its employees, and it will certainly make expense accounting and tax reporting simpler."

The new card system requires no deposit or cash balance. The agency will simply clear credit ratings of applicants for its member roads and they will handle billing directly with card subscribers. Holders of cards previously issued by the agency will automatically receive a new card.

Participating—The new cards will be accepted on any of the following roads:

Atchison, Topeka & Santa Fe; Baltimore & Ohio; Bangor & Aroostook; Boston & Albany; Boston & Maine; Central Vermont; Chesapeake & Ohio; Chicago & Eastern Illinois; Chicago, Burlington & Quincy; Monon; Chicago South Shore & South Bend; Colorado & Southern; Delaware & Hudson; Denver & Rio Grande Western; Duluth, Winnipeg & Pacific; Erie; Fort Worth & Denver; Grand Trunk; Great Northern; Gulf Coast Lines; Gulf, Mobile & Ohio; Illinois Central; International-Great Northern; Kansas City Southern; Louisiana & Arkansas; Minneapolis & St. Louis; Soo Line; Missouri-Kansas-Texas; M-K-T of Texas; Missouri Pacific; New York Central; Norfolk & Western; Northern Pacific; Pennsylvania; Pennsylvania-Reading Seashore Lines; Pittsburgh & Lake Erie; St. Louis-San Francisco; St. Louis, San

Francisco & Texas; Spokane, Portland & Seattle; Texas & Pacific; Union Pacific; Wabash, and Western Pacific.

Mail Transportation Probe Set by House Committee

The House of Representatives on July 13 authorized its Committee on the Post Office and Civil Service to conduct an investigation of the Post Office Department, including a study of "the transportation and distribution of mail."

The committee was specifically authorized to take up in its study "the transportation of regular mail by air" and "utilization of common carriers and other facilities for the transportation of mail."

The authorization came in adoption of a resolution (H.R. 304) which was introduced by Representative Murray, Democrat, Tennessee. The investigation would not be confined to transportation of the mails. It would also include such issues as classification of postal employees, and general postal administration.

People in the News

Senate Group Rejects Hall For Loco. Inspection Post

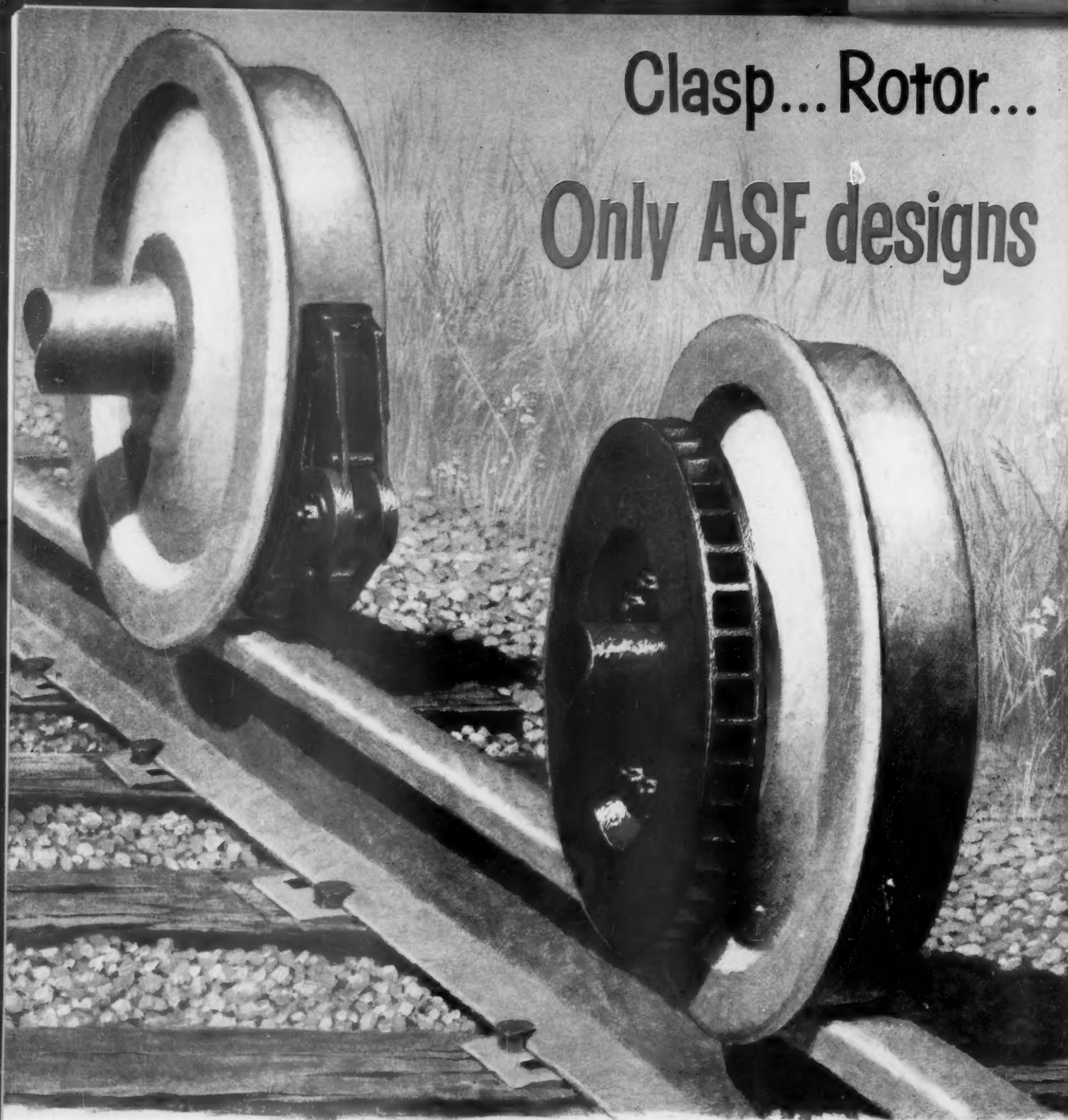
The Senate Committee on Interstate Commerce voted 9-to-6 on July 20 to advise the Senate that it should not confirm President Eisenhower's appointment of John A. Hall as director of locomotive inspection at the Interstate Commerce Commission.

Because it violated a "gentlemen's agreement" under which the directors had been members, alternately, of the Brotherhood of Locomotive Firemen & Enginemen and the Brotherhood of Locomotive Engineers, the nomination became controversial in labor circles. Mr. Hall is a BLE member, as was Edward H. Davidson, the latest director to serve with benefit of Senate confirmation. Adherence to the "gentlemen's agreement" would now make it the Firemen's "turn."

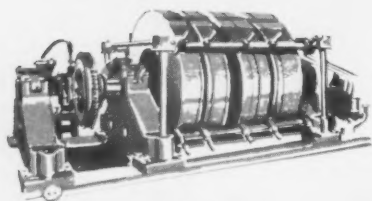
Mr. Davidson retired in 1952. Since that time the locomotive inspection

... **Shakespeare on the Housatonic** is being made available to the theater-going public this summer by the New Haven. First of two special air-conditioned trains to the American Shakespeare Festival at Stratford, Conn., left Grand Central Terminal, New York, at 6:35 p.m., July 23, carrying passengers to a production of "Julius Caesar." The second train will be August 13, for a presentation of "The Tempest." Roundtrip fare, including tax, is \$3.60.

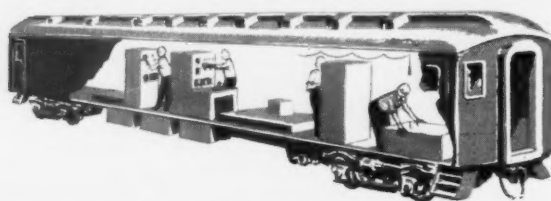
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ASF Brake Test Dynamometer permits close-range laboratory study of braking action . . . This unique machine can duplicate the stresses and kinetic energy of stops from 150 mph on down—service or emergency—as well as low or high speed drags.



ASF Brake Test Car furnishes final, on-line proof of brake design and brake performance . . . Over 1800 brakeway stops have been made to date with this ASF car—fitted at various times with ASF clasp, rotor and combination brakes.

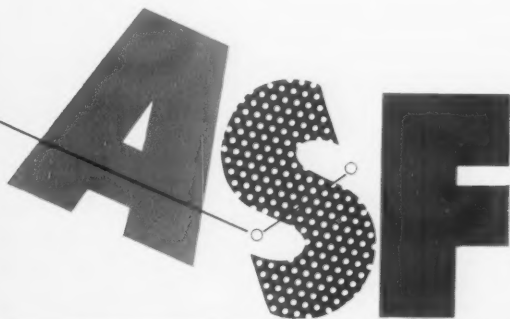
or Combination and builds all three types of brakes

Railroad men may well ask why only one company—American Steel Foundries—is prepared to build any type of brake.

The answer is *experience*. Not just the experience of *building* brakes for 35 years, but the kind that comes from being the only company equipped to do a thorough, objective job of *brake development*. The Brake Dynamometer and the ASF Brake Test Car, shown on the opposite page, are typical of the specialized equipment it takes to do that job.

But it takes more than specialized equipment. It takes men with the skill to design such equipment, with the technical background to use it properly, with the experience to interpret research data in practical terms. There's no easy way to design and develop many different types of brakes; no substitute for testing each brake under conditions that are identical with on-line train operation.

Ask your ASF Representative to show you the results of these on-line tests. That's the sure way to find the type of brake with the characteristics *you* want. Only at ASF can you *choose* the brake that's right for your road.



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work has been directed in turn by an acting director, Allyn C. Breed, by a Presidential appointee, Charles H. Grossman, whose nomination was subsequently withdrawn, by assistant director, James Friend, and by Mr. Hall, who has been serving since last October on the basis of an interim appointment.

Organizations

The Freight Loss and Damage Prevention Section of the AAR will hold a five-day Container and Loading Research Development Laboratory seminar for shippers at the AAR's Central Research Laboratory in Chicago, beginning August 1. The seminar will cover various phases of proper preparation of freight for shipment, and loading and bracing of freight in cars.

John M. Budd, president of the Great Northern, will be guest speaker at the 111th regular meeting of the **Northwest Shippers Advisory Board**, to be held July 28 in the Clarence Parker Hotel, Minot, N.D. Preliminary committee meetings will be held there the day preceding. After the close of the general session and luncheon (the latter to be held jointly with the **Minot Chamber of Commerce** and service clubs), there will be a side trip to Garrison dam. "Shippers View an All-Purpose Box Car" will be the subject of a talk by G. H. Shafer, general traffic manager, Weyerhaeuser Sales Company, at the general session. C. A. Naffziger, director of the AAR's Freight Loss & Damage Prevention Section, and R. E. Clark, manager, Closed Car Section, Car Service Division, also will be on the program. W. E. Keller, general chairman of the board, and vice-president, Truax-Traer Coal Company, will preside. The GN will operate a special train from the Twin Cities to Minot and return for board members attending the meeting.

Figures of the Week

Freight Car Loadings

Loadings of revenue freight in the week ended July 16 totaled 799,040 cars, the Association of American Railroads announced on July 21. This was an increase of 146,360 cars, or 22.4%, compared with the previous week; an increase of 104,495 cars, or 15%, compared with the corresponding week last year; and an increase of 7,626 cars, or 1%, compared with the equivalent 1953 week.

Loadings of revenue freight for the week ended July 9, which included the July 4 holiday, totaled 652,680

cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS			
For the week ended Saturday, July 9			
District	1955	1954	1953
Eastern	103,894	86,711	119,520
Alleghany	127,892	102,964	146,443
Pocahontas	48,442	37,013	47,908
Southern	101,452	91,011	107,583
Northwestern	111,220	97,902	127,755
Central Western	105,763	104,805	117,080
Southwestern	54,017	49,156	55,165
Total Western Districts	271,000	251,863	300,000
Total All Roads	652,680	569,562	721,454
Commodities:			
Grain and grain products	60,202	53,637	57,371
Livestock	4,733	5,601	5,639
Coal	104,105	78,818	101,494
Coke	10,555	7,048	12,653
Forest Products	33,868	28,857	38,696
Ore	76,109	65,755	93,555
Merchandise l.c.l.	55,886	49,374	62,927
Miscellaneous	307,222	280,472	349,119
July 9	652,680	569,562	721,454
July 2	696,734	618,559	670,273
June 25	799,472	713,160	818,450
June 18	785,425	707,237	812,578
June 11	786,707	697,583	797,252
Cumulative total, 27 weeks	18,651,393	17,071,388	19,755,502

In Canada.—Carloadings for the seven-day period ended July 7 totaled 73,428 cars, compared with 118,539 cars for the previous nine-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
July 7, 1955	73,428	27,193
July 7, 1954	64,919	24,970
June 30, 1955	118,539	42,029
June 30, 1954	104,563	36,333
Cumulative Totals		
July 7, 1955	1,965,764	837,711
July 7, 1954	1,810,325	756,679

New Facilities

Chesapeake & Ohio.—Six Reflectoscopes, for ultrasonic inspection, without disassembly, of axles of freight cars being repaired, have been delivered to the C&O by Sperry Rail Service. Reflectoscopes, mounted on small motor vehicles which travel beside the track along strings of freight cars, are said to facilitate testing up to 320 axle ends a day. Search units of the devices are applied to axle ends and structural discontinuities are identified and located visually on a screen.

New Haven.—Laying of 20,000 tons of 140-lb welded rail on an 81-mi stretch of main line was begun last week. The rail is being laid in the eastbound track, No. 2, from a point just east of Kingston, R.I., to New Haven, Conn. Within the next five years the road plans to complete installation of welded rail also on tracks 1 and 2, eastbound and westbound, from New York to Boston. Standard 39-ft rails have been welded into 1,560-ft lengths which are carried by trains of 40 specially equipped flat cars to work sites.

Supply Trade

John A. Inglis, recently retired foreign freight traffic manager of the Western Maryland, has joined the staff of **R. G. Hobelmann & Co.**, foreign freight forwarders and custom house brokers in Baltimore.

John Van Nort has been appointed representative of **T-Z Railway Equipment Company** on the West Coast.

William P. Morrison, who has been active in chemical weed and brush control, has joined the spray services department of **National Aluminate Corporation**. He will maintain offices at both Hutington, W. Va., and Chicago.

The **Robert Mitchell Company**, Montreal, will serve as Canadian distributors for the **National Motor Bearing Company**. Under arrangements completed between the two companies, the Mitchell company will not only handle Canadian distribution of NMB sealed circulating oil lubricating systems, but will eventually manufacture, in Canada, some component parts. A brief announcement in the July 18 *Railway Age* did not clarify the Mitchell company's position as NMB's Canadian outlet.

Mellor W. Stevenson has been appointed sales manager, Railway division, at the St. Louis office of **National Malleable & Steel Castings Co. R. E. Valentine**, who has been sales manager at St. Louis, was recently named assistant vice-president, sales, at the general offices in Cleveland.

Financial

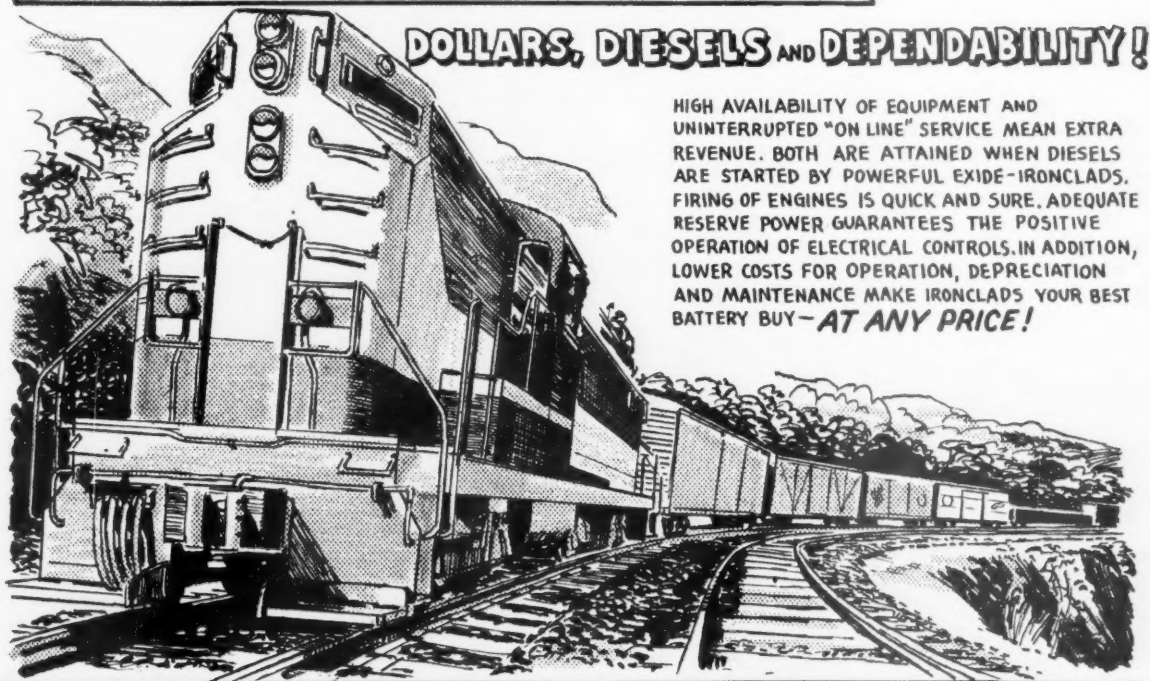
Katy Acts to Withdraw Recap Plan Before ICC

With four new members voting, the 21-man board of directors of the Missouri-Kansas-Texas has agreed to request Interstate Commerce Commission to take no further action on the revised plan, currently pending under the Mahaffie Act, for modifying the company's capital stock structure. At the same time, the board instructed officers of the company to take all necessary steps to withdraw and dismiss the entire proceeding.

The new directors, who represent a group of investment firms which last month acquired more than 500,000 shares of Katy common stock, announced that they are "unqualifiedly opposed" to the plan. The Mahaffie Act requires that any plan of recapitalization, after receiving ICC approval, (Continued on page 65)

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IRONCLAD[®] DIESEL STARTING BATTERIES



DOLLARS, DIESELS AND DEPENDABILITY!

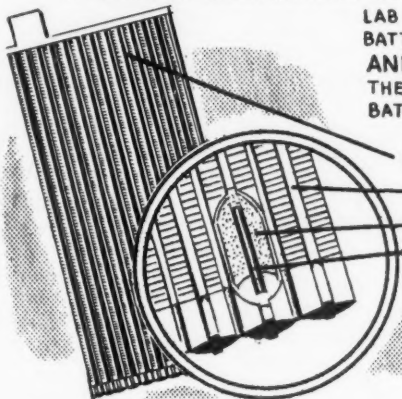
HIGH AVAILABILITY OF EQUIPMENT AND UNINTERRUPTED "ON LINE" SERVICE MEAN EXTRA REVENUE. BOTH ARE ATTAINED WHEN DIESELS ARE STARTED BY POWERFUL EXIDE-IRONCLADS. FIRING OF ENGINES IS QUICK AND SURE. ADEQUATE RESERVE POWER GUARANTEES THE POSITIVE OPERATION OF ELECTRICAL CONTROLS. IN ADDITION, LOWER COSTS FOR OPERATION, DEPRECIATION AND MAINTENANCE MAKE IRONCLADS YOUR BEST BATTERY BUY—**AT ANY PRICE!**

BATTERIES ARE **WORKED TO DEATH** BY EXIDE ENGINEERS TO LEARN **SECRETS OF LONGER LIFE**

SINCE 1910, RESEARCHERS HAVE GREATLY IMPROVED EXIDE-IRONCLAD PERFORMANCE AND USEFUL WORKING LIFE, BUT THE BASIC IRONCLAD PRINCIPLE OF TUBULAR CONSTRUCTION REMAINS THE SAME.



LAB TESTS OF IRONCLADS AGAINST CONVENTIONAL TYPES OF BATTERIES SHOW THAT THEY GIVE BETTER PERFORMANCE...
AND FROM 20% TO 30% LONGER LIFE!
THESE TWO FACTS, DEMONSTRATED BY THOUSANDS OF BATTERY USERS, ARE THE REASON WHY...



IRONCLAD POSITIVE PLATE
SLOTTED RETAINER TUBE
COMPRESSED ACTIVE MATERIAL
PROTECTED CONDUCTING GRID

EXIDE-IRONCLADS
ARE YOUR BEST POWER BUY
AT ANY PRICE!

LET EXIDE HELP SOLVE YOUR DIESEL STARTING BATTERY PROBLEM ① CALL AN EXIDE SALES ENGINEER FOR FULL DETAILS. ② WRITE FOR FORM 4843—ALL ABOUT MAINTAINING AND INSTALLING DIESEL STARTING BATTERIES.

Exide INDUSTRIAL DIVISION, The Electric Storage Battery Company, Philadelphia 2, Pa.

REVENUES AND EXPENSES OF RAILWAYS

(Dollar figures are stated in thousands; i.e., with last three digits omitted)

MONTH OF MAY AND FIVE MONTHS OF CALENDAR YEAR 1955

Name of Road	Average mileage operated during period	Operating Revenues				Operating Expenses				Operating Ratio				Net railway tax operating income			
		Total (inc. misc.)				Total				1955				1954			
		Pass.	Freight	Inc. misc.	Deprec.	Retire-ments	Deprec.	Retire-ments	Deprec.	1955	1954	1955	1954	1955	1954	1955	1954
Akron, Canton & Youngstown	May	171	5,519	8,530	4,066	375	86	538	663	318	318	67.2	81.4	874	884	\$59	\$19
May	5 mos.	1,711	52,418	82,463	39,778	3,444	630	2,995	3,118	2,995	2,995	70.2	81.4	734	343	266	134
Achison, Topeka & Santa Fe	May	13	1,711	3,260	32,613	6	3	6	3	3	3	72.3	80.3	13,354	7,568	5,760	2,770
May	5 mos.	13,098	191,914	13,098	226,930	21,170	29,520	39,332	32,433	43,203	43,203	72.3	80.3	6,150	3,525	2,625	1,375
Atlanta & St. Andrews Bay	May	82	1,716	4	1,751	1,566	201	122	13	24	24	45.7	44.8	222	119	67	80
May	5 mos.	82	1,716	4	1,751	1,566	201	122	13	24	24	45.7	44.8	222	119	67	80
Atlanta & West Point*	May	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
May	5 mos.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Western of Alabama*	May	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
May	5 mos.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Atlantic & Danville	May	205	144	...	146	123	28	30	2	10	5	71.3	86.5	42	9	5	17
May	5 mos.	205	144	...	146	123	28	30	2	10	5	71.3	86.5	42	9	5	17
Atlantic Coast Line	May	5,345	12,360	977	11,339	12,903	2,908	2,150	154	3,043	2,630	80.1	81.9	2,853	1,025	1,245	1,110
May	5 mos.	5,345	12,360	977	11,339	12,903	2,908	2,150	154	3,043	2,630	80.1	81.9	2,853	1,025	1,245	1,110
Charleston & Western Carolina	May	343	527	...	537	613	114	148	83	116	107	73.6	75.9	14,148	6,325	5,437	6,113
May	5 mos.	3,433	5,270	...	5,370	6,130	1,144	1,480	830	1,166	1,074	73.6	75.9	14,148	6,325	5,437	6,113
Baltimore & Ohio	May	6,178	33,659	1,907	38,210	32,332	4,574	3,763	408	7,071	6,320	80.5	80.5	8,973	3,006	4,343	3,307
May	5 mos.	6,182	146,851	7,759	165,721	155,302	18,812	18,061	2,393	30,309	30,566	80.5	80.5	8,973	3,006	4,343	3,307
Staten Island Rapid Transit	May	39	193	...	261	333	43	53	8	25	28	90.4	101.1	25	39	43	60
May	5 mos.	39	193	...	261	333	43	53	8	25	28	90.4	101.1	25	39	43	60
Bangor & Aroostook	May	602	1,049	...	1,114	1,195	200	200	17	224	211	66.2	70.1	333	147	263	236
May	5 mos.	602	1,049	...	1,114	1,195	200	200	17	224	211	66.2	70.1	333	147	263	236
Bessemer & Lake Erie	May	208	2,845	...	2,862	2,625	173	181	18	572	499	81.7	89.4	1,522	954	904	1,461
May	5 mos.	208	2,845	...	2,862	2,625	173	181	18	572	499	81.7	89.4	1,522	954	904	1,461
Boston & Maine	May	1,576	5,661	768	7,165	6,892	950	1,297	150	850	941	83.4	83.4	1,979	871	610	68
May	5 mos.	1,576	5,661	768	7,165	6,892	950	1,297	150	850	941	83.4	83.4	1,979	871	610	68
Cambria & Indiana	May	35	169	...	169	110	20	21	94	106	22	86.0	86.0	7,345	2,913	1,845	278
May	5 mos.	35	169	...	169	110	20	21	94	106	22	86.0	86.0	7,345	2,913	1,845	278
Canadian Pacific Lines in Maine	May	234	381	...	34	445	465	127	134	5	117	91	116.9	195	473	539	337
May	5 mos.	234	381	...	34	445	465	127	134	5	117	91	116.9	195	473	539	337
Canadian Pacific Lines in Vermont	May	90	207	...	12	326	307	60	47	5	34	28	98.7	98.7	13	89	70
May	5 mos.	90	207	...	12	326	307	60	47	5	34	28	98.7	98.7	13	89	70
Central of Georgia	May	1,764	3,347	128	3,744	3,229	595	527	37	600	545	84.0	83.5	228	522	285	285
May	5 mos.	1,764	3,347	128	3,744	3,229	595	527	37	600	545	84.0	83.5	228	522	285	285
Central of New Jersey	May	613	3,989	497	4,430	4,573	569	676	92	842	893	82.7	82.7	1,213	453	541	1,159
May	5 mos.	613	3,989	497	4,430	4,573	569	676	92	842	893	82.7	82.7	1,213	453	541	1,159
Central Vermont	May	422	858	44	969	893	185	235	17	100	99	83.6	83.6	4,935	2,314	1,672	1,136
May	5 mos.	422	858	44	969	893	185	235	17	100	99	83.6	83.6	4,935	2,314	1,672	1,136
Chesapeake & Ohio	May	5,111	30,299	651	32,747	26,915	3,960	3,955	383	5,621	4,803	72.5	72.5	10,955	4,919	6,168	4,507
May	5 mos.	5,111	30,299	651	32,747	26,915	3,960	3,955	383	5,621	4,803	72.5	72.5	10,955	4,919	6,168	4,507
Chicago & Eastern Illinois	May	868	2,412	131	2,746	2,265	353	330	26	2,401	2,048	83.9	83.9	610	72	320	249
May	5 mos.	868	2,412	131	2,746	2,265	353	330	26	2,401	2,048	83.9	83.9	610	72	320	249
Chicago & Illinois Midland	May	130	569	4	585	659	75	52	13	128	108	76.9	68.0	135	81	47	91
May	5 mos.	130	569	4	585	659	75	52	13	128	108	76.9	68.0	135	81	47	91
Chicago & North Western	May	7,873	12,722	1,756	16,210	15,206	2,715	2,370	331	2,889	2,807	88.9	88.9	1,002	545	372	104
May	5 mos.	7,873	12,722	1,756	16,210	15,206	2,715	2,370	331	2,889	2,807	88.9	88.9	1,002	545	372	104
Chicago, Burlington & Quincy	May	8,442	15,444	1,582	18,518	17,494	1,261	1,126	1,011	3,348	3,333	92.7	92.7	8,263	5,415	4,142	3,132
May	5 mos.	8,442	15,444	1,582	18,518	17,494	1,261	1,126	1,011	3,348	3,333	92.7	92.7	8,263	5,415	4,142	3,132
Chicago Great Western	May	1,470	2,684	6	2,851	2,701	451	400	54	420	421	67.5	67.5	938	408	363	341
May	5 mos.	1,470	2,684	6	2,851	2,701	451	400	54	420	421	67.5	67.5	938	408	363	341
Chicago, Indianapolis & Louisville	May	541	1,573	80	1,787	1,658	281	266	21	290	266	82.3	82.3	388	134	154	108
May	5 mos.	541	1,573	80	1,787	1,658	281	266	21	290	266	82.3	82.3	388	134	154	108
Chicago, Milw., St. Paul & Pacific	May	10,641	79,235	4,782	93,789	83,363	15,522	14,969	1,954	19,637	20,999	88.2	88.2	13,564	6,765	4,074	1,191
May	5 mos.	10,641	79,235	4,782	93,789	83,363	15,522	14,969	1,954	19,637	20,999	88.2	88.2	13,564	6,765	4,074	1,191
Chicago Rock Island & Pacific	May	7,920	12,246	1,369	14,982	14,351	2,214	2,153	207	2,551	2,586	79.1	82.1	3,137	1,222	1,291	1,243
May	5 mos.	7,920	12,246	1,369	14,982	14,351	2,214	2,153	207	2,551	2,586	79.1	82.1	3,137	1,222	1,291	1,243
Chic., St. Paul, Minn. & Omaha	May	1,616	2,264	129	2,566	2,490	434	426	81	426	426	77.8	77.8	17,962	7,292	7,400	6,550
May	5 mos.	1,616	2,264	129	2,566	2,490	434	426	81	426	426	77.8	77.8	17,962	7,292	7,400	6,550
Clinchfield*	May	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
May	5 mos.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

* Because of a strike, figures for the A&WP, W of Ala. and Clinchfield are not available.

(Continued on page 20)

Leading the Way — Regardless!

By Hungerford



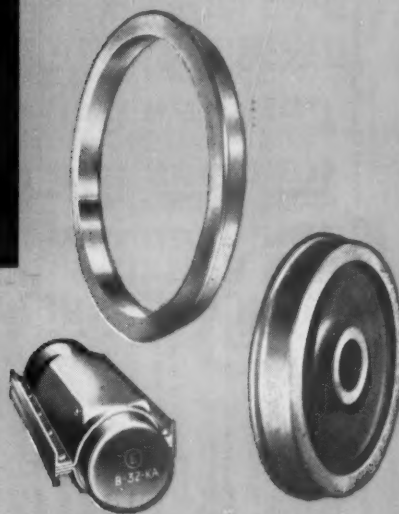
E Edgewater Steel Company

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We will be glad to send you enlarged copies of this Hungerford cartoon (without advertising copy) for posting on your office and shop bulletin boards, or a cut for your company magazine, at cost.

Serving America's Railroads

with
**ROLLED STEEL TIRES
ROLLED STEEL WHEELS
AND DRAFT GEARS**



REVENUES AND EXPENSES OF RAILWAYS

(Dollar figures are stated in thousands; i.e., with last three digits omitted)
MONTH OF MAY AND FIVE MONTHS OF CALENDAR YEAR 1955

Name of Road	Average million operated during period	Operating Revenues				Operating Expenses				Operating ratio—1955	Net railway tax		Net railway operating income
		Pass.	Freight	Total	Retire- ments	Total	Retire- ments	Total	Depreciation		from operation	accruals	
		1955	1954	1955	1954	1955	1954	1955	1954	1955	1954	1955	1954
Colorado & Southern.....	May	719	1,076	1,795	157	1,952	25	1,977	41	83.5	355	178	141
.....5 mos.		722	5,109	5,831	734	6,565	813	7,378	297	79.6	1,810	918	755
Ft. Worth & Denver.....	May	1,037	1,329	2,366	267	2,633	44	2,677	44	85.7	228	20	97
.....5 mos.		1,037	7,218	8,255	1,368	8,623	185	8,808	137	82.2	776	230	548
Colorado & Wyoming.....	May	40	886	926	58	974	72	1,046	56	63.2	118	65	51
.....5 mos.		40	4,886	5,326	58	5,384	72	5,456	56	64.0	316	267	223
Columbus & Greenville.....	May	168	148	316	31	347	4	351	6	86.2	25	18	12
.....5 mos.		168	736	904	156	1,060	19	1,079	31	87.3	74	74	21
Delaware & Hudson.....	May	168	4,234	4,402	591	4,993	66	5,059	180	91.1	1,324	499	809
.....5 mos.		168	20,782	21,450	591	21,450	66	21,516	180	91.1	1,324	499	809
Delaware, Lackawanna & Western.....	May	962	5,532	6,494	831	7,325	137	7,462	331	81.5	2,088	3,483	1,393
.....5 mos.		962	26,479	27,441	3,843	30,282	794	31,076	1,610	80.1	6,432	2,174	2,763
Denver & Rio Grande Western.....	May	2,165	5,880	8,045	905	8,950	102	9,052	282	66.7	2,100	877	1,207
.....5 mos.		2,165	28,276	30,441	3,326	33,767	501	34,268	1,416	66.7	10,983	5,392	5,767
Detroit & Mackinac.....	May	232	848	1,080	175	1,255	200	1,455	47	69.0	56	42	18
.....5 mos.		232	4,848	5,080	727	5,807	132	5,939	47	69.0	56	42	18
Detroit & Toledo Shore Line.....	May	50	653	703	79	772	3	775	21	55.3	258	176	101
.....5 mos.		50	3,420	3,667	398	4,065	3	4,068	21	55.3	258	176	101
Detroit, Toledo & Ironton.....	May	464	1,692	2,156	281	2,437	23	2,460	93	80.1	348	345	377
.....5 mos.		464	8,256	8,720	1,354	9,574	23	9,597	93	80.1	348	345	377
Duluth, Missabe & Iron Range.....	May	569	5,255	5,824	310	6,134	59	6,193	464	68.1	3,515	1,684	1,938
.....5 mos.		569	26,284	26,853	1,774	28,627	59	28,686	464	68.1	3,515	1,684	1,938
Duluth, South Shore & Atlantic.....	May	553	660	1,213	183	1,396	10	1,406	549	83.5	3,515	418	3,133
.....5 mos.		553	3,033	3,280	630	3,913	10	3,923	549	83.5	3,515	418	3,133
Duluth, Winnipeg & Pacific.....	May	175	436	611	67	678	4	682	2	80.1	86	35	32
.....5 mos.		175	2,448	2,623	349	2,972	22	2,994	2	80.1	86	35	32
Elgin, Joliet & Eastern.....	May	236	3,640	3,876	229	4,105	50	4,155	50	77.8	191	67	159
.....5 mos.		236	16,360	17,127	1,345	16,472	50	16,522	50	77.8	191	67	159
Erie.....	May	2,224	12,027	14,251	1,802	16,053	112	16,165	495	58.3	8,340	4,053	2,859
.....5 mos.		2,224	56,517	60,309	7,119	67,428	112	68,547	495	58.3	8,340	4,053	2,859
Florida East Coast.....	May	571	2,465	2,936	46	3,002	46	3,048	99	73.2	789	192	386
.....5 mos.		571	12,923	13,500	233	13,733	46	13,779	99	73.2	789	192	386
Georgia Railroad.....	May	332	269	601	89	690	3	693	8	98.4	73	13	38
.....5 mos.		332	1,295	1,319	447	1,766	3	1,769	8	98.4	73	13	38
Grand Trunk Western.....	May	932	4,650	5,582	748	6,330	53	6,383	95	70.7	1,440	313	691
.....5 mos.		932	22,880	23,812	3,337	26,149	53	26,192	95	70.7	1,440	313	691
Can. Natl. Lines in New Eng.....	May	172	152	324	84	408	8	416	3	86.0	646	321	197
.....5 mos.		172	839	901	293	1,194	8	1,202	3	86.0	646	321	197
Great Northern.....	May	8,282	20,422	28,704	5,065	33,769	45	34,219	1	11.8	123	121	552
.....5 mos.		8,282	83,861	88,818	15,505	104,323	45	109,828	1	11.8	123	121	552
Green Bay & Western.....	May	224	349	573	93	666	4	670	8	85.6	104	54	30
.....5 mos.		224	1,807	1,931	283	2,014	4	2,018	8	85.6	104	54	30
Gulf, Mobile & Ohio.....	May	2,757	6,571	9,328	366	9,694	20	9,714	8	73.8	646	321	197
.....5 mos.		2,757	31,141	33,892	528	34,420	20	34,440	8	73.8	646	321	197
Illinois Central.....	May	6,531	20,354	26,885	5,281	32,166	94	32,260	279	71.6	2,111	407	1,316
.....5 mos.		6,531	99,047	104,512	16,811	121,323	94	122,264	279	71.6	2,111	407	1,316
Illinois Terminal.....	May	355	835	1,190	152	1,342	24	1,366	41	88.1	299	99	70
.....5 mos.		355	3,889	4,244	632	4,881	24	4,905	41	88.1	299	99	70
Kansas City Southern.....	May	891	3,446	4,337	388	4,725	41	4,766	207	88.0	873	409	318
.....5 mos.		891	16,250	17,141	1,760	18,901	41	19,261	207	88.0	873	409	318
Kansas, Oklahoma & Gulf.....	May	327	381	708	61	769	6	775	11	73.5	135	60	45
.....5 mos.		327	1,963	2,128	289	2,417	6	2,423	11	73.5	135	60	45
Lake Superior & Ishpeming.....	May	149	482	631	64	695	10	705	16	48.7	374	49	345
.....5 mos.		149	2,772	2,921	245	3,166	10	3,176	16	48.7	374	49	345
Lehigh & Hudson River.....	May	96	272	368	36	404	4	408	8	66.0	89	37	29
.....5 mos.		96	1,343	1,439	169	1,608	4	1,612	8	66.0	89	37	29
Lehigh & New England.....	May	180	2,873	3,053	371	3,424	17	3,441	19	67.8	450	176	147
.....5 mos.		180	12,873	13,704	1,381	15,084	17	15,101	19	67.8	450	176	147
Lehigh Valley.....	May	1,154	5,233	6,387	798	7,185	101	7,286	209	80.4	1,137	922	1,909
.....5 mos.		1,154	24,495	25,644	3,475	28,119	101	28,220	209	80.4	1,137	922	1,909
Long Island.....	May	360	1,115	1,475	738	1,213	43	1,256	125	83.5	873	309	262
.....5 mos.		360	5,389	5,757	3,296	6,053	43	6,096	125	83.5	873	309	262

* Because of a strike, figures for the Georgia are not available.

REVENUES AND EXPENSES OF RAILWAYS


(Dollar figures are stated in thousands; i.e., with last three digits omitted)

MONTH OF MAY AND FIVE MONTHS OF CALENDAR YEAR 1955

Name of Road	Average mileage operated during period	Operating Revenues				Operating Expenses				Net from railway operation	Net railway operating income									
		1954				1955														
		Pass.	Freight	Total	Retire-ments	Total	Retire-ments	Total	Trans-portion											
Louisiana & Arkansas	May	753	2,135	54	2,286	2,127	263	92	2,482	1,259	1,240	55.1	58.3	500	463					
Louisiana & Arkansas	5 mos.	753	10,476	250	11,186	11,017	1,087	1,150	137	339	2,975	6,130	51.8	59.1	2,485	2,312				
Louisville & Nashville	May	4,733	9,631	359	15,555	15,406	1,143	1,218	135	1,353	2,992	4,170	84.3	82.7	8,898	8,525				
Louisville & Nashville	5 mos.	4,733	50,165	2,426	56,628	56,249	4,733	4,733	473	1,731	20,768	47,730	68.5	84.3	21,118	9,562				
Maine Central	May	911	1,822	80	2,039	2,086	132	416	27	3,368	389	78	21	80.0	90.0	195	143			
Maine Central	5 mos.	911	9,538	421	10,957	11,045	2,018	2,099	135	1,681	1,992	339	163	75.4	76.2	2,607	982			
Midland Valley	May	334	191	196	147	45	43	5	9	4	5	55	11	63.7	80.7	29	51			
Midland Valley	5 mos.	334	896	911	821	203	199	30	57	11	25	262	591	71.5	316	156	173			
Minneapolis & St. Louis	May	1,397	1,602	4	2,999	1,672	328	127	255	1,707	328	127	30	82.9	129	87	113			
Minneapolis & St. Louis	5 mos.	1,397	7,746	16	8,059	7,974	1,397	1,397	139	667	1,570	123	487	91.6	92.5	2,269	1,616			
Minn., St. Paul & S. Ste. Marie	May	3,221	2,965	65	6,251	3,117	894	66	667	3,008	3,208	601	112	5.603	12.806	13.385	44			
Minn., St. Paul & S. Ste. Marie	5 mos.	3,221	12,963	269	13,991	13,583	3,098	3,215	282	3,000	3,208	601	112	5.603	12.806	13.385	233			
Mississippi Central	May	148	216	221	181	48	66	2	31	27	6	11	49	131	169	68.5	93.9	27	2	
Mississippi Central	5 mos.	148	1,099	1,030	3,237	3,173	1,863	12	136	135	27	72	252	71.4	830	75.5	90	103	71	
Missouri Illinois	May	172	519	522	1,213	1,213	593	63	38	11	12	13	12	131	286	272	218	129	87	
Missouri Illinois	5 mos.	172	2,349	2,361	5,042	5,042	1,101	60	381	917	212	257	416	1,714	4,710	81.0	80.9	1,108	625	
Missouri-Kansas-Texas Lines	May	3,241	5,101	234	8,582	5,819	903	911	86	484	917	212	257	416	1,714	4,710	81.0	80.9	1,108	625
Missouri-Kansas-Texas Lines	5 mos.	3,241	25,692	1,240	29,412	30,011	4,171	4,530	150	4,311	4,653	1,217	1,238	11,529	22,809	23,705	77.5	79.0	6,603	2,396
Missouri Pacific	May	6,917	16,053	774	18,582	16,108	3,173	2,863	391	3,714	3,064	391	499	67	14,818	13,583	79.7	81.3	3,763	1,213
Missouri Pacific	5 mos.	6,917	76,031	3,712	86,202	86,194	13,637	11,933	1,522	17,581	16,140	3,983	4,232	32	62,182	60,901	78.2	81.9	19,088	7,167
International-Great Northern	May	1,101	2,560	145	3,806	3,601	520	469	122	63	1,003	2	63	2,401	2,409	83.2	84.8	221	226	
International-Great Northern	5 mos.	1,101	13,866	668	15,635	15,661	2,617	2,505	195	2,411	611	331	318	3,518	3,531	2,386	83.5	85.1	3,521	1,118
Gulf Coast Lines	May	1,333	1,830	1,333	4,496	4,496	1,333	1,333	1,333	4,496	4,496	1,333	1,333	4,496	4,496	1,333	1,333	4,496	4,496	
Gulf Coast Lines	5 mos.	1,333	16,080	391	17,546	17,594	3,311	3,451	230	2,456	2,589	571	478	5,691	12,679	12,900	72.3	73.8	4,867	2,339
Monongahela	May	177	544	546	522	65	68	16	57	54	1	177	308	325	56.3	62.3	239	27	87	52
Monongahela	5 mos.	177	2,417	2,417	2,430	330	323	78	280	279	68	4	863	1,511	1,511	1,511	62.2	63.5	919	181
Montour	May	51	142	152	147	13	19	2	49	41	1	5	539	139	116	85.0	78.9	23	15	
Montour	5 mos.	51	1,282	1,282	1,282	69	73	12	217	217	81	5	539	139	116	85.0	78.9	23	15	
Nash., Chatt. & St. Louis	May	1,043	1,939	55	3,037	3,037	1,043	1,043	1,043	3,037	3,037	1,043	1,043	3,037	3,037	1,043	1,043	3,037	3,037	
Nash., Chatt. & St. Louis	5 mos.	1,043	7,939	335	9,321	1,658	2,529	227	1,860	2,056	693	562	4,012	4,652	11,119	11,119	91.8	74.1	772	330
New York Central	May	10,710	48,705	7,898	67,313	57,529	8,174	9,533	1,035	10,110	12,106	2,239	1,155	27,277	50,503	56,020	79.0	87.4	13,435	5,198
New York Central	5 mos.	10,710	228,239	40,167	302,904	291,240	31,026	41,366	4,944	50,318	61,411	11,296	5,414	123,558	239,536	261,623	79.1	98.9	63,268	23,880
Pittsburgh & Lake Erie	May	221	3,736	62	4,042	2,669	395	409	12	917	851	281	66	1,173	2,772	2,648	68.4	78.1	1,269	394
Pittsburgh & Lake Erie	5 mos.	221	15,386	321	16,563	11,461	1,991	2,055	199	4,008	4,928	1,327	360	5,526	12,980	10,111	78.4	96.2	3,583	631
New York, Chicago & St. Louis	May	2,178	13,199	113	13,801	13,821	2,178	2,178	2,178	13,801	13,801	2,178	2,178	13,801	13,801	2,178	2,178	13,801	13,801	
New York, Chicago & St. Louis	5 mos.	2,178	60,032	697	62,600	57,351	7,112	6,489	707	10,279	9,868	1,790	1,662	22,283	43,563	41,805	69.6	72.3	19,038	8,994
New York, New Haven & Hartford	May	1,769	7,223	3,896	12,888	12,888	1,769	1,769	1,769	12,888	12,888	1,769	1,769	12,888	12,888	1,769	1,769	12,888	12,888	
New York, New Haven & Hartford	5 mos.	1,769	35,911	19,140	62,573	62,183	7,281	9,283	1,324	9,233	9,509	1,895	1,168	27,699	49,491	51,708	79.7	77.6	12,681	4,968
New York Connecting	May	21	1,835	1,962	3,855	389	80	109	25	22	22	22	22	22	22	22	22	22	22	22
New York Connecting	5 mos.	21	7,944	2,286	10,245	10,245	1,835	376	399	126	107	91	22	22	22	22	22	22	22	22
New York, Ontario & Western	May	541	494	503	1,538	1,538	541	541	541	1,538	1,538	541	541	1,538	1,538	541	541	1,538	1,538	
New York, Ontario & Western	5 mos.	541	2,286	2,324	4,610	4,610	541	541	541	4,610	4,610	541	541	4,610	4,610	541	541	4,610	4,610	
New York, Susquehanna & Western	May	120	406	45	552	485	55	59	5	62	65	13	8	208	365	361	66.0	74.5	188	73
New York, Susquehanna & Western	5 mos.	120	2,292	229	2,751	2,751	120	120	120	2,751	2,751	120	120	2,751	2,751	120	120	2,751	2,751	
Norfolk & Western	May	1,226	17,104	326	18,200	13,855	2,057	325	3,711	3,711	3,711	3,711	3,711	3,711	3,711	3,711	3,711	3,711	3,711	
Norfolk & Western	5 mos.	1,226	70,996	1,407	72,999	66,799	10,828	10,925	1,366	16,719	15,950	3,130	1,683	23,530	55,805	54,167	69.8	68.8	8,111	1,740
Norfolk Southern	May	605	864	876	2,345	2,345	605	605	605	2,345	2,345	605	605	2,345	2,345	605	605	2,345	2,345	
Norfolk Southern	5 mos.	605	4,127	4,127	1,931	3,993	876	886	61	1,228	1,228	139	233	1,230	3,213	3,213	77.1	81.9	960	225
Northern Pacific	May	6,866	13,549	571	15,219	13,264	2,498	2,187	281	3,670	3,670	281	419	5,861	12,099	12,475	79.5	91.6	3,120	1,548
Northern Pacific	5 mos.	6,866	61,233	2,712	68,016	63,643	9,458	11,182	1,336	13,134	14,225	2,595	1,896	28,662	56,855	58,975	82.5	92.7	12,064	4,971
Northwestern Pacific	May	329	1,292	18	1,324	1,268	339	271	31	108	114	4	6	353	829	813	62.6	64.1	196	211
Northwestern Pacific	5 mos.	329	5,885	20	6,023	5,165	1,483	1,596	157	190	482	20	29	1,699	3,961	3,961	63.4	76.7	2,292	878
Oklahoma City-Ada-Atoka	May	132	378	70	526	526	132	132	132	526	526	132	132	526	526	132	132	526	526	
Oklahoma City-Ada-Atoka	5 mos.	132	1,638	381	2,449	2,449	132	132	132	2,449	2,449	132	132	2,449	2,449	132	132	2,449	2,449	
Pennsylvania	May	10,037	63,131	9,738	82,906	72,847	8,976	8,376	1,397	17,099	15,293	2,925	1,296	33,996	64,645	59,481	80.2	82.2	15,928	5,027
Pennsylvania	5 mos.	10,037	278,885	50,511	329,396	321,361	39,011	42,622	6,932	71,606	77,368	11,621	6,990	161,951	298,617	302,771	81.6	86.1	67,508	24,266
Pennsylvania-Reading Seashore Line	May	338	620	474	1,432	1,432	338	338	338	1,432	1,432	338	338	1,432	1,432	338	338	1,432	1,432	
Pennsylvania-Reading Seashore Line	5 mos.	338	2,903	1,016	3,947	3,947	338	338	338	3,947	3,947	338	338	3,947	3,947	338	338	3,947	3,947	

(Continued on page 24)

The



1360

136 CF&I 1360 RAIL

Height 7-5/16"
Head Depth 1-15/16"


132RE

Height 7-1/8"
Head Depth 1-3/4"

Fishing and Base Dimensions of 136
CF&I and 132RE are identical.

JOINTS FOR 136 ALSO FIT 132RE.

CF&I



Western Pacific Railroad engineers chose the Smoke
Creek Desert Area of Nevada as the site for the
initial installation of the new 136 CF&I rail section.

is first!

The Western Pacific Railroad, furthering its progressive policy of serving the West, is the first road to adopt the new 119 and 136 pound rail sections recently announced by CF&I.

These new sections — developed to keep pace with the ever-increasing demands for a stronger, smoother, safer track structure—have met the approval and acceptance of prominent Western Railroad engineers.

THE COLORADO FUEL AND IRON CORPORATION
DENVER, COLORADO



1190

119 CF&I 1190 RAIL

Height 6-13/16"
Head Depth 1-7/8"

115RE

Height 6-5/8"
Head Depth 1-11/16"

Fishing and Base Dimensions of 119
CF&I and 115RE are identical.

JOINTS FOR 119 ALSO FIT 115RE.

CF&I

3051

REVENUES AND EXPENSES OF RAILWAYS

(Dollar figures are stated in thousands; i.e., with last three digits omitted)
MONTH OF MAY AND FIVE MONTHS OF CALENDAR YEAR 1955

Name of Road	Average mileage operated during period	Operating Revenues (inc. misc.)				Operating Expenses (Maintenance, Depreciation, and Other)				Operating ratio 1955	Net railway operating income 1955	Railway tax, 1955	Net railway operating income 1954	
		Total				Total								
		Pass.	Freight	Transp.	Other	Transp.	Other	Transp.	Other					
Pittsburg & Shawmut.....	May	165	165	156	24	133	38	12	5	112	25	36	4	66
Pittsburgh & West Virginia.....	5 mos.	737	737	744	837	134	154	212	37	61	175	92	137	333
Pittsburgh & West Virginia.....	5 mos.	132	3,286	7,414	652	103	104	128	37	61	175	55	237	109
Reading.....	5 mos.	3,286	3,286	3,286	3,286	3,286	3,286	3,286	3,286	3,286	3,286	3,286	3,286	3,286
Reading.....	5 mos.	1,304	8,668	9,308	8,709	1,252	1,129	186	181	1,223	1,161	79.7	80.2	457
Reading.....	5 mos.	1,305	41,649	46,351	5,632	5,601	929	46	794	18,355	36,303	36,172	36,172	1,016
Richmond, Fredericksburg & Potomac May	118	1,668	407	2,348	2,337	2,088	322	26	322	331	67	63.1	66.7	277
Rutland.....	5 mos.	118	7,521	11,490	11,595	1,465	1,504	124	1,689	333	112	782	66.6	1,407
Rutland.....	5 mos.	392	346	392	368	369	68	11	49	59	114	329	89.5	11
Sacramento Northern.....	5 mos.	392	1,339	1,339	1,339	1,339	1,339	1,339	1,339	1,339	1,339	1,339	1,339	1,339
Sacramento Northern.....	5 mos.	267	942	942	942	942	942	942	942	942	942	942	942	942
St. Louis-San Francisco.....	5 mos.	4,601	9,324	14,925	14,925	14,925	14,925	14,925	14,925	14,925	14,925	14,925	14,925	14,925
St. Louis, San Francisco & Texas May	157	3,140	157	3,140	3,140	3,140	3,140	3,140	3,140	3,140	3,140	3,140	3,140	3,140
St. Louis, San Francisco & Texas May	157	3,140	157	3,140	3,140	3,140	3,140	3,140	3,140	3,140	3,140	3,140	3,140	3,140
St. Louis Southwestern Lines.....	5 mos.	1,561	5,485	5,485	5,485	5,485	5,485	5,485	5,485	5,485	5,485	5,485	5,485	5,485
St. Louis Southwestern Lines.....	5 mos.	1,561	25,383	48	26,532	48	26,532	48	26,532	48	26,532	48	26,532	48
Seaboard Air Line.....	May	4,061	11,366	954	13,276	13,028	1,923	1,857	2,299	555	364	4,362	93.8	1,978
Southern Railway.....	5 mos.	4,061	56,775	5,380	62,532	62,532	62,532	62,532	62,532	62,532	62,532	62,532	62,532	62,532
Southern Railway.....	5 mos.	6,289	22,461	1,162	23,797	19,188	2,791	2,807	281	3,433	762	398	70.1	2,347
Southern Railway.....	5 mos.	6,289	101,489	6,088	116,139	102,471	13,534	11,663	19,272	3,499	2,033	34,259	74,177	18,999
Alabama Great Northern.....	5 mos.	326	1,989	325	9,023	7,247	1,189	1,138	155	1,371	291	175	250.2	160
Alabama Great Northern.....	5 mos.	326	7,988	325	9,023	7,247	1,189	1,138	155	1,371	291	175	250.2	160
Cinn., New Orleans & Texas P.C. May	337	5,149	158	5,336	3,495	538	480	57	694	518	134	77	1,079	608
Georgia Southern & Florida.....	5 mos.	337	19,482	881	21,363	21,363	21,363	21,363	21,363	21,363	21,363	21,363	21,363	21,363
Georgia Southern & Florida.....	5 mos.	475	3,840	392	4,648	4,648	4,648	4,648	4,648	4,648	4,648	4,648	4,648	4,648
New Orleans & Northeastern.....	5 mos.	204	1,383	49	1,508	933	122	178	119	144	42	32	1,040	156
New Orleans & Northeastern.....	5 mos.	204	4,755	244	5,324	4,969	828	758	93	699	686	212	1,033	578
Southern Pacific.....	May	40,201	40,201	2,513	42,714	42,714	42,714	42,714	42,714	42,714	42,714	42,714	42,714	42,714
Texas & New Orleans.....	5 mos.	4,315	19,712	2,135	21,558	21,558	21,558	21,558	21,558	21,558	21,558	21,558	21,558	21,558
Spokane International.....	5 mos.	150	308	150	308	308	308	308	308	308	308	308	308	308
Spokane International.....	5 mos.	150	1,381	150	1,381	1,381	1,381	1,381	1,381	1,381	1,381	1,381	1,381	1,381
Spokane, Portland & Seattle.....	May	944	2,578	67	2,709	2,309	370	299	46	407	386	108	29	297
Tennessee Central.....	5 mos.	286	1,452	1	1,465	1,381	1,40	210	1,315	1,810	543	151	433.3	457
Texas & Northern.....	5 mos.	8	126	8	126	126	126	126	126	126	126	126	126	126
Texas & Northern.....	5 mos.	8	628	8	665	383	20	22	46	11	6	34	133	221
Texas & Pacific.....	May	1,831	5,721	316	6,563	6,130	1,103	1,031	92	1,017	999	251	198	607
Texas Mexican.....	5 mos.	1,831	29,045	1,993	33,148	32,819	5,054	5,399	471	4,327	5,355	1,925	10,819	764
Toledo, Peoria & Western.....	5 mos.	161	1,221	1,221	1,221	1,221	1,221	1,221	1,221	1,221	1,221	1,221	1,221	1,221
Union Pacific.....	5 mos.	239	608	239	608	608	608	608	608	608	608	608	608	608
Union Pacific.....	5 mos.	239	2,826	239	2,826	2,826	2,826	2,826	2,826	2,826	2,826	2,826	2,826	2,826
Utah.....	5 mos.	99	65	99	65	65	65	65	65	65	65	65	65	65
Virginian.....	5 mos.	611	3,472	1	3,572	2,927	460	395	7	1,903	1,751	559	598	492
Virginian.....	5 mos.	611	16,541	16	17,111	14,541	2,191	2,065	324	3,354	3,114	973	653	380
Wabash.....	May	2,393	8,480	369	9,577	8,716	1,241	1,332	131	1,362	1,459	369	761	718
Ann Arbor.....	5 mos.	294	3,667	294	3,667	3,667	3,667	3,667	3,667	3,667	3,667	3,667	3,667	3,667
Western Maryland.....	5 mos.	816	3,489	4	4,112	3,681	600	500	30	666	665	153	812	314
Western Maryland.....	5 mos.	816	17,419	16	18,513	17,381	2,699	2,462	267	3,077	3,295	1,916	497	718
Western Pacific.....	5 mos.	1,193	4,126	208	4,440	3,928	823	692	66	656	668	185	326	314
Wisconsin Central.....	5 mos.	1,042	2,505	29	2,688	2,431	1,440	335	38	367	384	88	77	314
Wisconsin Central.....	5 mos.	1,042	11,265	150	12,110	11,603	1,780	1,654	187	1,869	2,111	430	950	314

THE NEW **MULTI-LITE**

RECHARGEABLE

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LASTS FOR YEARS!

Yes, it's the battery with 250 use cycles . . . actually 250 batteries wrapped into one. The new Multi-Lite Rechargeable Trainmen's Lantern Battery lasts years under ordinary use. Here are some of the Multi-Lite advantages that mean long, uninterrupted performance . . . and cut your lantern battery costs to a minimum:

- A nickel cadmium, hermetically sealed lantern battery
- The battery may stand in a partially or fully discharged condition for extended periods . . . self discharge of the battery is very low.
- The battery maintains high voltage in use with high light intensity throughout each cycle
- There is no corrosion or battery leakage during the life of these hermetically sealed cells.
- A battery that has 250 use cycles.
- Substantial storeroom savings . . .
Drastic reduction of storeroom inventory.
Can be stored indefinitely with no harmful effects.



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DEPEW, N. Y.

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Multi-Lite Division, Dept. RA-85
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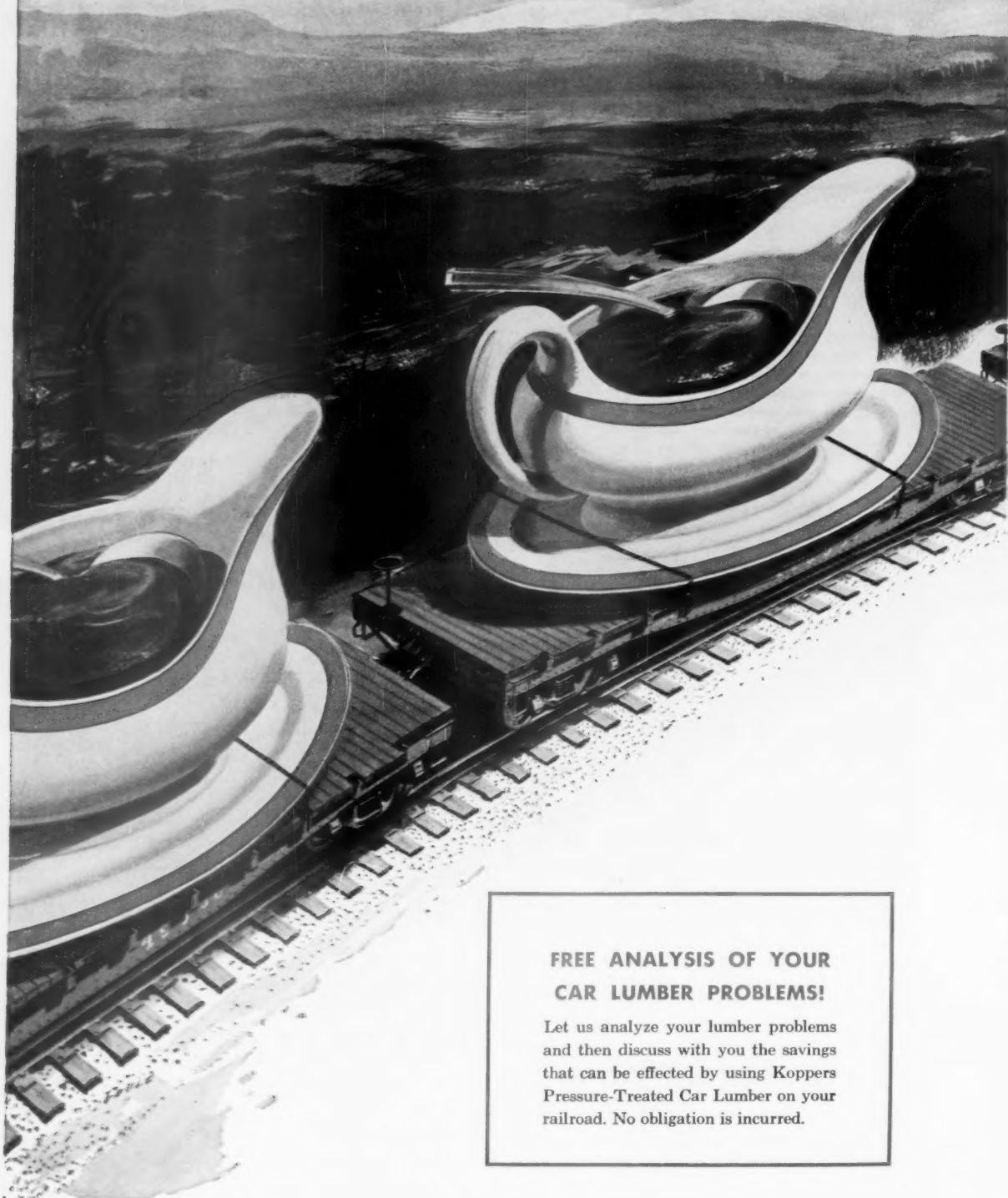
Name

Railroad

Address

City Zone State

Climb Aboard the



FREE ANALYSIS OF YOUR CAR LUMBER PROBLEMS!

Let us analyze your lumber problems and then discuss with you the savings that can be effected by using Koppers Pressure-Treated Car Lumber on your railroad. No obligation is incurred.

Gravy Train!



Get a 10-year free ride with Koppers Pressure-Treated Car Lumber

What happens when two new flatcars start out in life together—one with *untreated* wood members, and the other with *pressure-treated* wood members?

In five years, according to railroad records, the untreated car will usually be sidetracked for costly repairs to the lumber.

On the other hand, the car using *treated* lumber will just be "getting warmed up" when it reaches the same five-year mark. Seventeen months later, it will be at the break-even point. In other words, these extra months of service will have paid for the some-

what higher original cost of the pressure-treated lumber.

From then on it's all gravy!

From then on—in fact for the next ten years or more*—you get a "free ride" in respect to maintenance costs and out-of-service losses caused by decay damage. These revenue-cutting items are *eliminated* by constructing or repairing cars with Koppers Pressure-Treated Lumber.

*Seventeen years is the average service life for Pressure-Treated Car Lumber.

KOPPERS COMPANY, INC.

Wood Preserving Division, Pittsburgh 19, Pennsylvania



PRESSURE-TREATED CAR LUMBER



New G-E axle-driven generators give the extra power, reliability for long, trouble-free

General Electric's new GMG-162 axle-driven motor generator has over twenty-five percent more reserve power than competitive equipment. Here's what that means:

1. Better battery record. There is enough power available to charge low batteries while the car is in operation. Therefore, fewer standby rechargings are required.

2. Should axle generators in other cars become inoperative, increased demand can be met effectively. In a recent test simulating emergency conditions, load requirements

of four modern air-conditioned passenger cars were supported by *one* GMG-162.

In addition, General Electric's GMG-162 has a highly simplified control system, uses only two control panels, eliminates armature reversing switch and reduces number of moving parts. It is easy to install and to maintain. For more information contact your G-E Apparatus Sales representative. General Electric Company, Locomotive and Car Equipment Department, Erie, Pa. 113-5A

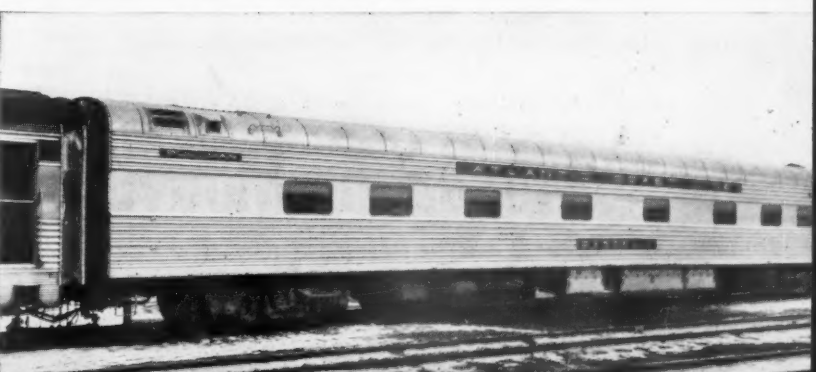
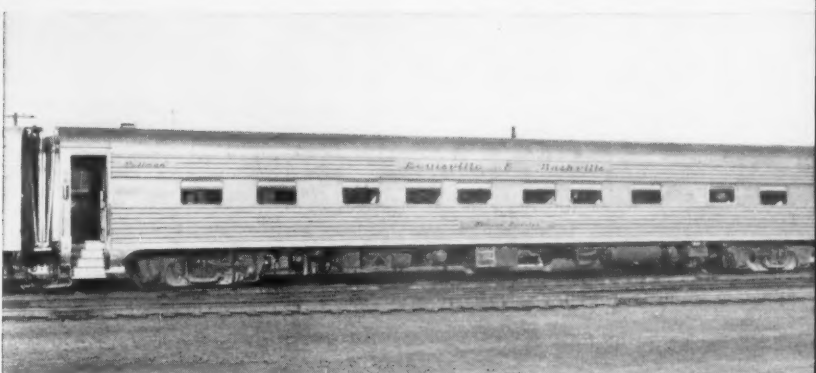
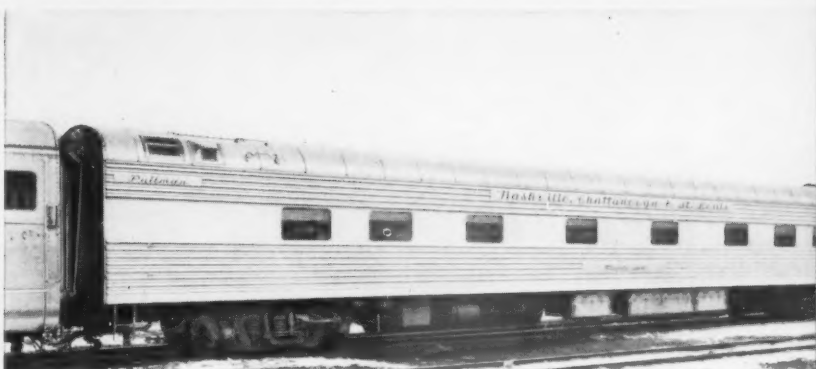
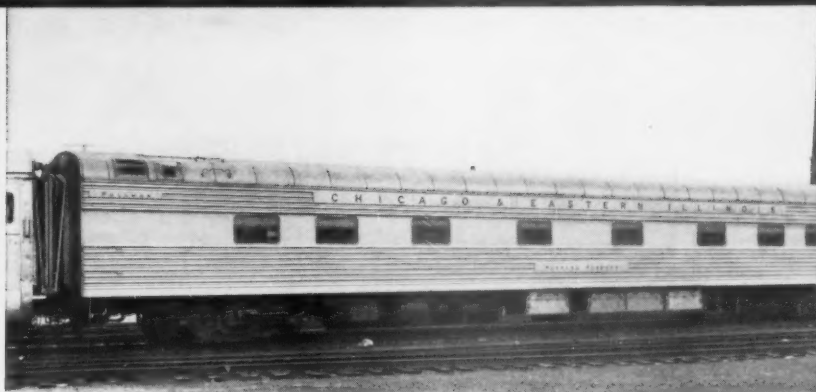
Progress Is Our Most Important Product

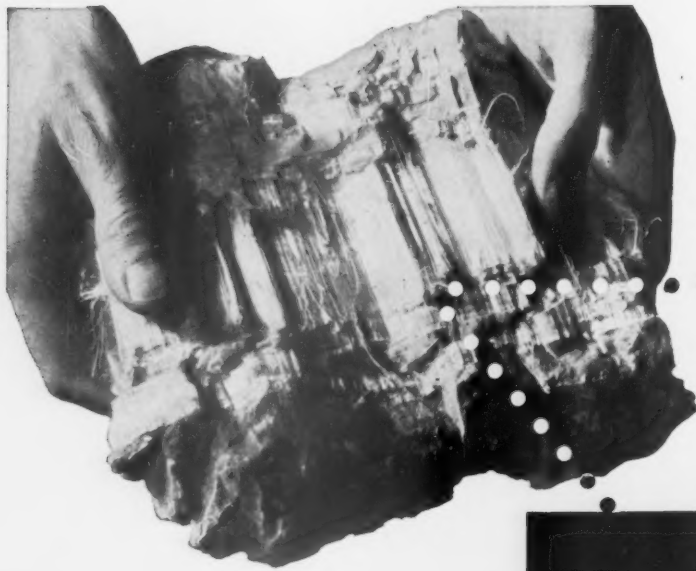
GENERAL  ELECTRIC



“Dixieland” operation

The first cars equipped with G.E.'s new GMG-162 were delivered to the Canadian National and Rock Island railroads in 1954. In the short time since then, orders have been received from: Atlantic Coast Line, Nashville, Chattanooga and St. Louis, Chicago and Eastern Illinois, Florida East Coast, Louisville and Nashville.





From the
ageless mineral
ASBESTOS

*...come these fireproof
long-wearing versatile*

JOHNS-MANVILLE CONSTRUCTION MATERIALS

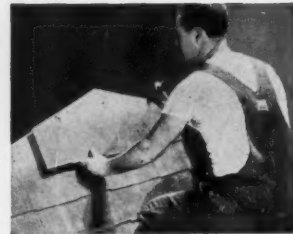
In thousands of railroad installations throughout the country, Johns-Manville Asbestos construction materials are helping to reduce construction and maintenance costs.

By combining strong, durable asbestos fibres with another permanent material—portland cement—Johns-Manville has succeeded in developing a variety of construction materials that are long-lasting, fireproof and highly resistant to corrosion. These products need no preservative treatment, require little if any maintenance.

Illustrated are six Johns-Manville asbestos-cement products that are widely used in construction. For further information about these, or other J-M products for railroad use, write to Johns-Manville, Box 60, New York 16, N. Y.



Smoothgroin® Asbestos Siding. Smooth-surfaced with grained appearance; silicone sealed against moisture, rigid, pre-punched for nailing. Available in 7 different colors and in white.



American Colonial Shingles. Each shingle equivalent to 5 ordinary roofing shingles. Pre-punched for nailing, self-aligning, easy and quick to apply. Handsome grained effect in 9 beautiful colors.



Flexstone® Asbestos Roofing. The most enduring, and economical type of roof protection. This built-up roofing resists weather, wear and the drying-out action of the sun.



Asbestos Flexboard®. Large sheets can be used indoors or out for new building or remodeling. Easy to handle, flexible, fireproof. Needs no paint for preservation.



Corrugated Asbestos Transite®. Large, strong sheets are easy to apply. Ideal for roofs and sidewalls of buildings, such as freight houses and diesel shops.



Transite® Asbestos-Cement Pipe. Completely non-metallic, it won't rust or rot. Resists corrosion. Light in weight, easy to install. Used for water and sewage lines.



Johns-Manville

**97 YEARS OF SERVICE
TO TRANSPORTATION**

The test that **PROVED-IN** ITV-Microwave for Railroad Operations!

Experimental Link by

**Federal-
Farnsworth**

**for Rock Island in Chicago
is the first demonstration by a
railroad of the unlimited
opportunities in combining
Industrial TV and Microwave**

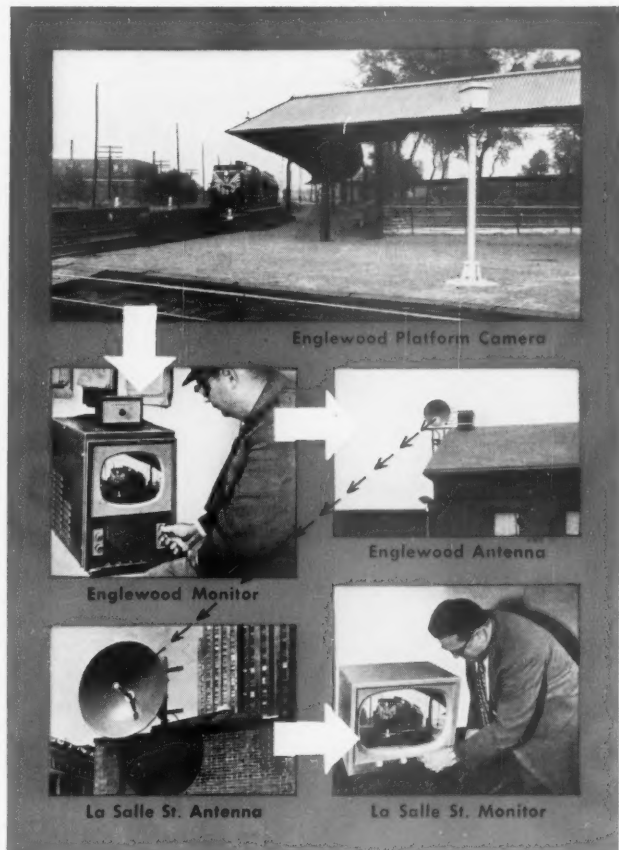
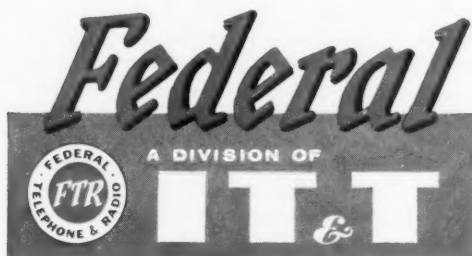
The Chicago, Rock Island and Pacific Railroad Company and Federal-Farnsworth have completed a history-making test that opens the way to broader and more efficient use of closed circuit TV by the railroad industry.

In the Chicago demonstration, a weather-proof, rotating ITV camera was mounted on the platform of the busy Englewood Station at the main line crossing. Visual information on train arrivals and departures and the loading and unloading of passengers, baggage, and mail was fed to a TV monitor, thence to a microwave antenna for transmission to a slave monitor in the La Salle Street Union Station... six miles away... enabling Rock Island executives to "see" train and passenger movements at the instant they were happening!

The Chicago test not only pioneered ITV-Microwave transmission by a railroad, but proved-in the value of this modern communication tool to traffic control in high-density areas.

ITV—"The Eyes of Industry"—has already proved its worth in railroad operations, such as reading of car numbers, checking of equipment, car inspection, yard surveillance, and security work. Now, Farnsworth ITV and Federal Microwave links... of any length or channel capacity... bring to railroad communications and signaling greater flexibility and versatility... the enormous advantage of *instantaneous, visual contact with conditions which may be miles away.*

**For complete data on the test that proved-in
ITV-Microwave for railroad operations,
write to Federal's Railroad Industry Sales
Organization, Dept. P-947.**



Everything you need for any ITV-Microwave application:

- The standard Farnsworth ITV System consists of lightweight camera and 10-inch-screen monitor, featuring 600-line resolution, remote optical focusing and all camera controls at the monitor.
- Federal Microwave, for interworking with ITV, provides today's finest equipment for links or networks of any channel capacity. More than 6,000 route-miles of Federal Microwave already installed in the U.S.



Whatever the application or distance, Federal-Farnsworth Systems, backed by the vast technical and manufacturing resources of the world-wide IT&T, meet all needs of railroad applications for ITV-Microwave facilities.

Federal Telephone and Radio Company

A Division of INTERNATIONAL TELEPHONE AND TELEGRAPH CORPORATION
100 KINGSLAND ROAD • CLIFTON, NEW JERSEY

In Canada: Standard Telephones and Cables Mfg. Co. (Canada) Ltd., Montreal, P.Q.
Export Distributors: International Standard Electric Corp., 67 Broad St., New York



27 Baldwins help cut operating costs for the Monongahela Railway Company

All operating motive power for the Monongahela Railway Company is supplied by twenty-seven 1200-hp Baldwin Diesel-electric switchers. Their economy and flexibility have been real assets to the MRY.

No picnic at best, coal country railroading today poses plenty of problems for the operating men of roads like the Monongahela (covering the mining territory between Brownsville, Pa. and Fairmont, W. Va.). The combination of a depression in coal and river competition forced a wholesale tightening-up of operations. Dieselization has been a big help in lowering operating costs.



MRY Superintendent, C. H. "Charlie" Siebart explains it this way: "Two things made Dieselization a must—even for a coal-hauling road like ours. First, of course, was the far lower cost of Diesel power. Second was the coal situation that brought us up against small, short haul loads that aren't easy to handle economically. Cheap, flexible motive power was the answer . . . and our Baldwins have given us just that!"

Their 1200-hp Baldwins average only 65 gallons of fuel oil during an eight-hour shift of yard and short haul running for the MRY. Best of all, the

same engines are interchangeable for yard or road work. In the yard, they work alone; on the road, two or more are hooked up in series to provide the power needed.

Rugged Baldwin construction plus the use of careful operating techniques have meant important maintenance savings for the MRY. They've had just five road failures in 2½ years of Diesel operation. The first locomotive wheel they had to turn had 2 years

behind it. Such low maintenance has been a vital factor in holding operating costs down.

Low running costs, minimum maintenance and their ability to handle efficiently every road and yard assignment have made the MRY's Baldwins pay off. Those same operating benefits are cutting operating costs for users of Baldwin Diesel-electric locomotives across the country and around the world.



Eddystone Division

BALDWIN - LIMA - HAMILTON

Prepared for trouble ?



You don't have to be armed to the teeth to avoid communications trouble. Not when your communications are supplied by the Bell System.

A planned program of preventive maintenance is an important part of Bell System service. Its purpose is to prevent interruptions.

In the laboratory, technicians are continually developing new and more efficient equipment. In the field, Long Lines technicians frequently visit critical points of your communications system to observe conditions and to improve operations.

Alternate routings are an integral part of plan-

ning by communications engineers to protect your service and prevent interruptions.

The entire program is backed by the Bell System's 79 years of communications experience.

We supply railroads with reliable private line telephone and teletypewriter service, maintain mobile radio facilities and provide channels for telemetering and supervisory control.

Bell System communications engineers will be glad to survey your communications needs without charge. Call your Bell Telephone representative today.

BELL TELEPHONE SYSTEM



TELEPHONE

TELETYPEWRITER

MOBILE RADIO

TELEMETERING AND REMOTE CONTROL CHANNELS



By
Greenville...

New standardized

70-TON COVERED HOPPER

insures low initial and operating costs!

You're looking at one of the top value leaders in freight cars this year—Greenville's sturdy new 70-ton, 2003 cu. ft. covered hopper car for shipping cement, potash and other dry materials. Developed after years of research on the hopper car needs of various roads, it's built to a proven standardized design that includes a host of quality features—all available at lower cost because of faster assembly techniques and high production.

Operating costs for Greenville's covered hopper are low, too—insured by such serviceable features as:

Welded construction—throughout the car body. Rivets are used only on roof, eave extensions and other places where welding is not permissible or practical.

Weather-tight loading hatches—also designed for easier loading.

Pedestal-type car trucks—arranged for use with cartridge type roller bearings to facilitate easier movement and fast changing of wheel pairs. Friction-bearing trucks can also be a part of this standard car.

Latest improved specialties—running boards, hand brakes, air brakes and draft gears—as well as all necessary conventional parts for safe, efficient operation.

You can easily get more information on this traffic-building covered hopper. Wire or write today.



GREENVILLE STEEL CAR COMPANY

SUBSIDIARY OF PITTSBURGH FORGINGS COMPANY

GREENVILLE, PENNSYLVANIA

Phone: GREENVILLE 1850



These New Cars, fabricated largely of nickel alloy steels, accelerate at twice the rate of the old, and provide 50% greater deceleration. Controls and safety devices are powered by

a 24-cell Edison "B4H" nickel-iron-alkaline storage battery. ACF Industries, Inc., New York 8, N. Y., built this modern type car for New York City Transit Authority.

4,766,019 passengers daily **...so New York City Transit Authority turns to Nickel Alloys**

TAKING CARE of such a tremendous traffic load, naturally, puts a strain on equipment. Each car must be built for maximum safety, and for annual wear and tear from hundreds of thousands of passengers, and innumerable starts and stops.

New York City Transit Authority's answer is a new type of car that makes wide use of nickel alloys. Alloys that cut maintenance. And power costs, too, in a car that's lighter and brighter than the city has ever before seen.

The builder, ACF Industries, Inc., used truck frames and bolsters of 2½% nickel steel. High strength, low alloy steels containing nickel are utilized for car and underframing. During years of use, this type of wrought nickel steel keeps much

of its original strength. Because it's five times as corrosion-resistant as carbon steel.

Each car also uses some 2500 pounds of rigidized stainless steel, Type 302. In underseat paneling and beneath windows, this chromium-nickel alloy adds strength, cuts weight, resists scuffing, and needs no paint. Seat frames, backing, hand poles and hand straps are likewise, Type 302, a labor-saving chromium-nickel stainless steel.

Alloys containing nickel cut bulk and dead-weight, minimize wear and corrosion, add beauty and safety. So let us help you with our wide experience. Write for List A of available publications. It includes a simple form that makes it easy for you to outline your problem.



THE INTERNATIONAL NICKEL COMPANY, INC. 67 Wall Street
New York 5, N. Y.

What's New in Products

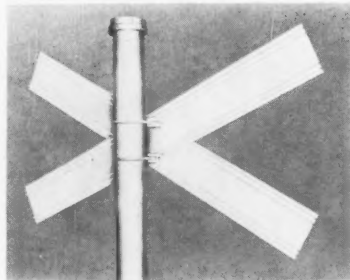


FACE of plate is smooth to provide base for reflectorized sign material, while . . .

Aluminum Crossbuck Sign

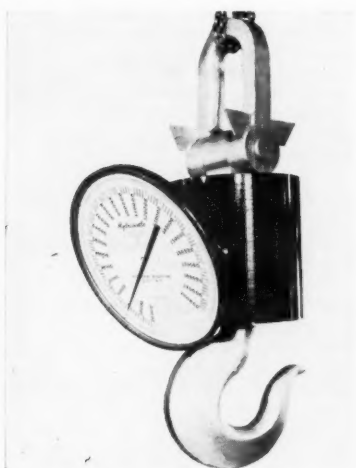
A new extruded-aluminum plate especially designed for use in reflectorized crossbuck signs has recently been announced. Integral stiffeners on the back of the plate are said to provide additional structural strength.

This extruded-aluminum plate is available in two basic designs; one for 6-ft and one for 4-ft crossbuck signs. If desired, the sections are available cut to length and with mounting



. . . BACK of this extruded-aluminum plate has ribs which supply extra strength.

holes drilled. The stiffener ribs on the back of the plate are said to be so positioned that they provide even support for the mounting bolts. It is also reported that the position of these ribs will permit application of the sign on standard pipe supports with the use of Signal Section adapter clamp No. 16477. It is recommended that stainless steel or aluminum bolts be used for application to avoid fastener corrosion. *Aluminum Company of America, Pittsburgh* •



Heavy-Duty Crane Scale

Especially designed for businesses where high tonnage weighing is required, a new static hydraulic-type crane scale has a capacity of 100 tons. According to the manufacturer, the new scale is particularly time-saving and practical in weighing extremely heavy loads by crane suspension means. The unit is designed with alloy-steel cylinder and suspension parts plus numerous safety features, including

an ultimate load safety factor of 500 tons. The scale is equipped with tare adjustment so net load readings can be taken direct from the dial. *Hydroway Scales, Inc., 20624 West Eight Mile rd., Detroit 19* •



Heavy-Duty Vacuum Cleaner

A heavy-duty electric vacuum cleaner for industrial and automotive use, No. 95, is said to have up to 20 per cent

more cleaning power, a dry capacity of 1½ bushels of dirt, and a wet recovery capacity of 13 gal.

The device will move 75 cu ft of air per min through a 1 in. orifice, and has a maximum sealed suction rating of 70 in. of water. The motor is rated at 1½ hp. A flexible accordion type hose is standard equipment. This hose measures 5 ft but may be expanded to 15 ft. It has a 1½-in. diameter through its length. The unit is equipped with a portable steel tank which has four 3-in. casters that allow towing by the hose without danger of tipping. A locking device on one of the casters permits holding of the machine when desired, even though the hose is fully extended.

Accessories included as standard are a 6-in. nozzle for upholstery cleaning, a 6-in. brush, and a crevice tool. Also supplied is a hose swivel which can be rotated 360 deg. The unit is 31 in. high and 18½ in. wide, with a diagonal width of 23¾ in. Operation is on 115 or 220 volts. *Black & Decker Manufacturing Co., Towson, Md.* •



Drop-Shaft Hand Brake

This Peacock non-spin horizontal-wheel drop-shaft hand brake is designed for application to flat cars. To set the brake, the wheel is turned clockwise when looking down on it. Using only half this force and rotating the wheel counter-clockwise releases the brake. It can be released even though the brakes are held by an emergency air application. There is no pawl or trip.

The hand wheel and brake shaft can be raised or lowered when the brake is either set or released. All

More New Products

rotating parts are fitted with Oilite or bronze bushings. Without the drop shaft, weight is approximately 70 lb. The brake has 20-in. chain travel. It has been tested and approved by the AAR. *National Brake Company, 30 Church st., New York 7 •*



New Lift Truck Has Panoramic Visibility

A new concept in lift truck engineering, the Monomast, now being introduced, consists of two box-type sections, one telescoping in the other.

The new unit allows its operator a clear, unobstructed view to both forks and load, permitting faster operating speed and reducing driver fatigue. Additional operating advantages are said to be faster maneuverability, faster approach, more accurate load placing and safer load handling.

Total weight of the Monomast upright is about the same as standard type assemblies, but its tubular design is claimed to be stronger than comparable models. Torsional rigidity has been increased 80% and mast deflection reduced 50% over conventional upright or mast assemblies.

The Monomast design allows a 15% increase in hoist speed, to 58 ft per min, with a corresponding increase in load lowering speed. Slight horizontal carriage flotation permits the lift truck to angle back out of tight positions after load depositing.

All standard hydraulic attachments can be mounted on the Monomast attachment carriage; non-hydraulic attachments are also available. The Monomast mounting is conventional and can be field-installed on current 3,000- and 4,000-lb Hyster models UC-30 and YC-40 without alteration. *Hyster Company, 2902 N.E. Clackamas, Portland 8, Ore., or 1003 Myers st., Danville, Ill. •*



Emergency Lock Release

A new emergency lock release, just placed on the market, is said to be capable of replacing or supplementing many of the locks now used in the railway industry.

Above an ordinary padlock is a small control box containing an emergency glass, similar to a fire alarm. The glass holds a release pin and a spring in place which permits unlocking the padlock with a key in normal use. In emergencies, when time does not permit locating the key, breaking the glass permits the release pin and spring to operate and unfasten the hasp so the door may be opened without unlocking the padlock. An electric switch, provided as an extra, may be connected to a local police, fire or watchman station, or hooked in to any railroad signaling circuit, to sound an alarm when the glass is broken.

Some possible railway applications, according to the maker, are stations that normally are not open at night,



to permit emergency access by train crews; on freighthouses, for instant entry in case of fire; for small worksheds housing handcars or tools; on telephones along the right of way; to protect fire fighting apparatus or extinguishers on wooden bridges, and even to lock box cars to prevent tampering, yet permit emergency entry.

Whether the new lock is practical for attachment to railway switches, permitting their release without a key in case of emergency, is yet to be tested.

After use, the glass can be easily replaced by any one with a special key.

When hooked to an electric switch, the alarm siren, bell signal light or other device operates immediately on breaking the glass and cannot be turned off or stopped by cutting wires or operating the inside mechanism. *American Allsafe Company, 1245 Niagara st., Buffalo 13, N.Y. •*



New Vacuum Cleaner

A powerful, low-priced, wet-dry industrial vacuum cleaner, the E-200, just announced, is said to be equally suitable for such heavy volume jobs as cleaning out elevator pits, freight cars and bulk storage areas, for ordinary maintenance cleaning, or for

cleaning things as delicate as switchboard wiring systems.

The E-200 features a maximum 45-in. water lift and 18-gage steel tank with a capacity of 10 gal wet or 1 1/4 bushels dry. The manufacturer points out that it will pick up water, cleaning solutions, liquid spillage, dirt, lint, scraps of foreign material—in fact, anything wet or dry. It will spray paints and insecticides or blow dirt and dust out of inaccessible places such as motors, machines or bins.

The E-200 is equipped with a Universal type a-c—d-c, 115-volt, 600-watt motor, a precision ball bearing power unit permanently sealed, and 30-ft, 18-gage, 3-conductor cable with built-in strain reliever. It weighs only 48 lb, is portable, is mounted on four large free-turning casters, and moves freely in any direction. A full range of attachments is available. *Multi-Clean Products, Inc., 2277 Ford parkway, St. Paul 1, Minn. •*

REMEMBER SEPTEMBER!

IT'S THE **BIG**
WEEK IN CHICAGO!

SEE THE LATEST
developments in
railroad equipment —
things are moving *fast*
in railroading today . . .
here's your chance to get
up-to-date information
all in one place at one time!

ALL FIVE MEET AT THE SHERMAN!

4 Mechanical Department
Conventions

1 Allied Railway Supply
Exhibit

• AIR BRAKE ASSOCIA-
TION

• CAR DEPARTMENT OF-
FICER'S ASS'N

• LOCOMOTIVE MAIN-
TENANCE OFFICER'S
ASS'N

• RAILWAY FUEL &
TRAVELING ENGI-
NEER'S ASS'N

• AND THE ALLIED
RAILWAY SUPPLY EX-
HIBIT

SUN. MON. TUES. WED.

SEPT.
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**ALLIED RAILWAY
SUPPLY ASSOCIATION**
INC.

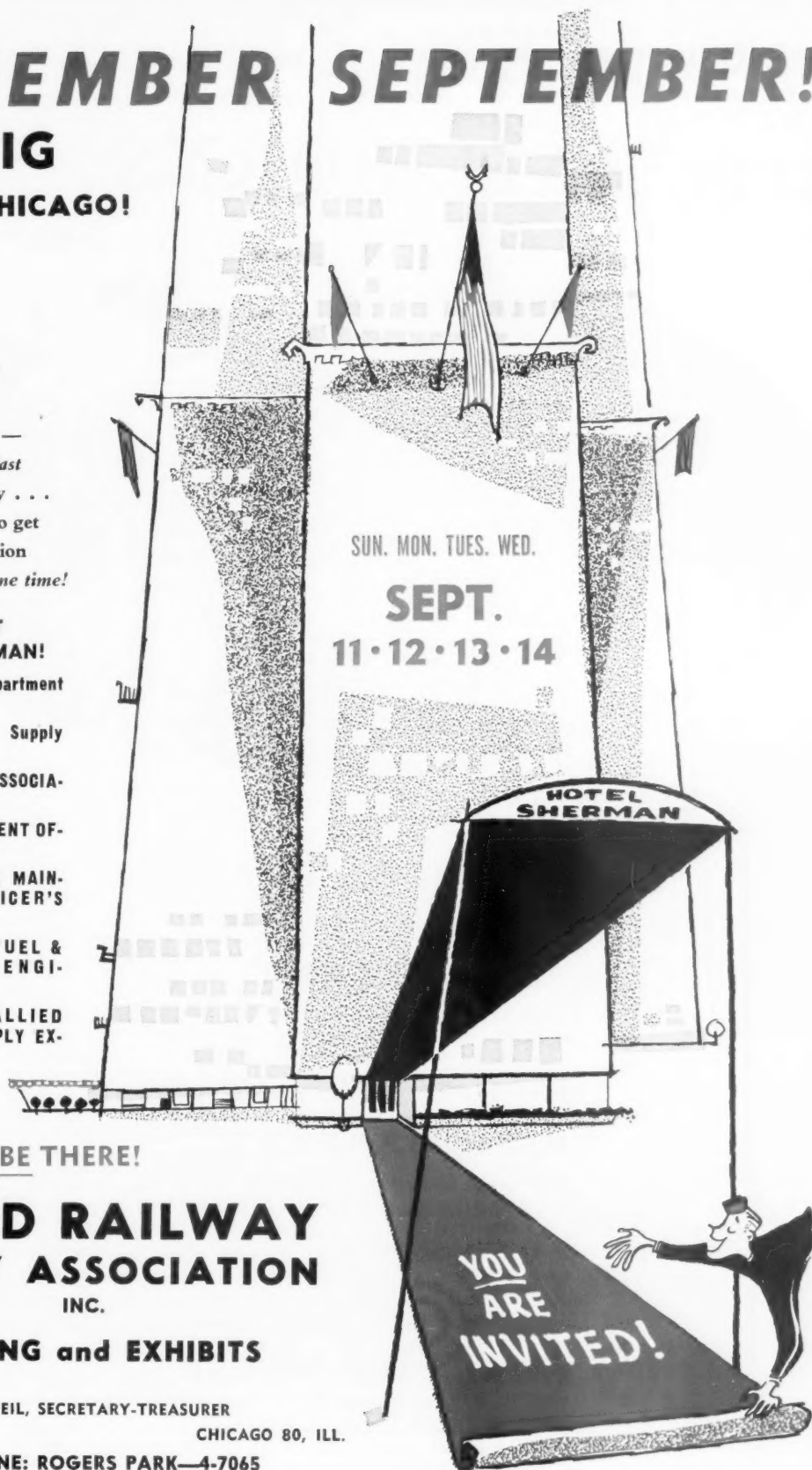
MEETING and EXHIBITS

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How to Increase America's "Standard of Living"

The standard of living—whether it is to be high or low—of any country depends upon the possession and efficient use of the best available tools of production. In a primitive country where the most advanced tool for soil cultivation is an ox-powered wooden plow—hardly more than a stick—the general standard of living is bound to be low. Working with poor tools, the average production per inhabitant is low. When the total product is divided among the inhabitants, the average share which each person gets (i.e., the country's "standard of living"), at best, can hardly exceed the level of bare subsistence.

Transportation is an important part of the process of production. Whatever is done to encourage greater efficiency in transportation has the effect of making increased production possible. And when production rises, the share of products per inhabitant (i.e., the "standard of living") also goes up. In North America—and other areas of economic progress—the standard of living has risen greatly over the past 25 years, and it still tends to rise. The reason is that constantly improved tools of production are being used—so that any given number of people, using these improved tools, can produce a larger output without longer hours of labor or greater exertion.

In the U.S.A. there was a tremendous increase in production per person when the steel plow and mechanical reaper came into use. Each man working on a farm produced many times as many bushels of grain per annum with the steel plow and the mechanical reaper—as one man could produce with the old wooden plow, and with harvesting by hand-sickle or scythe.

The standard of living increased enormously, also, when the railroad came along to take over the job of long-haul transportation from the Conestoga wagon. When larger locomotives and longer trains entered the picture, the production of transportation per man-hour was again greatly increased, and the standard of living rose still further. The point is that, when efficiency of production—including efficiency of transportation—increases, it isn't just the transportation companies who benefit. Instead, as the amount of labor necessary to produce a thousand bushels of grain

or a thousand ton-miles of transportation declines, every man, woman and child in the country benefits. The nation's standard of living rises.

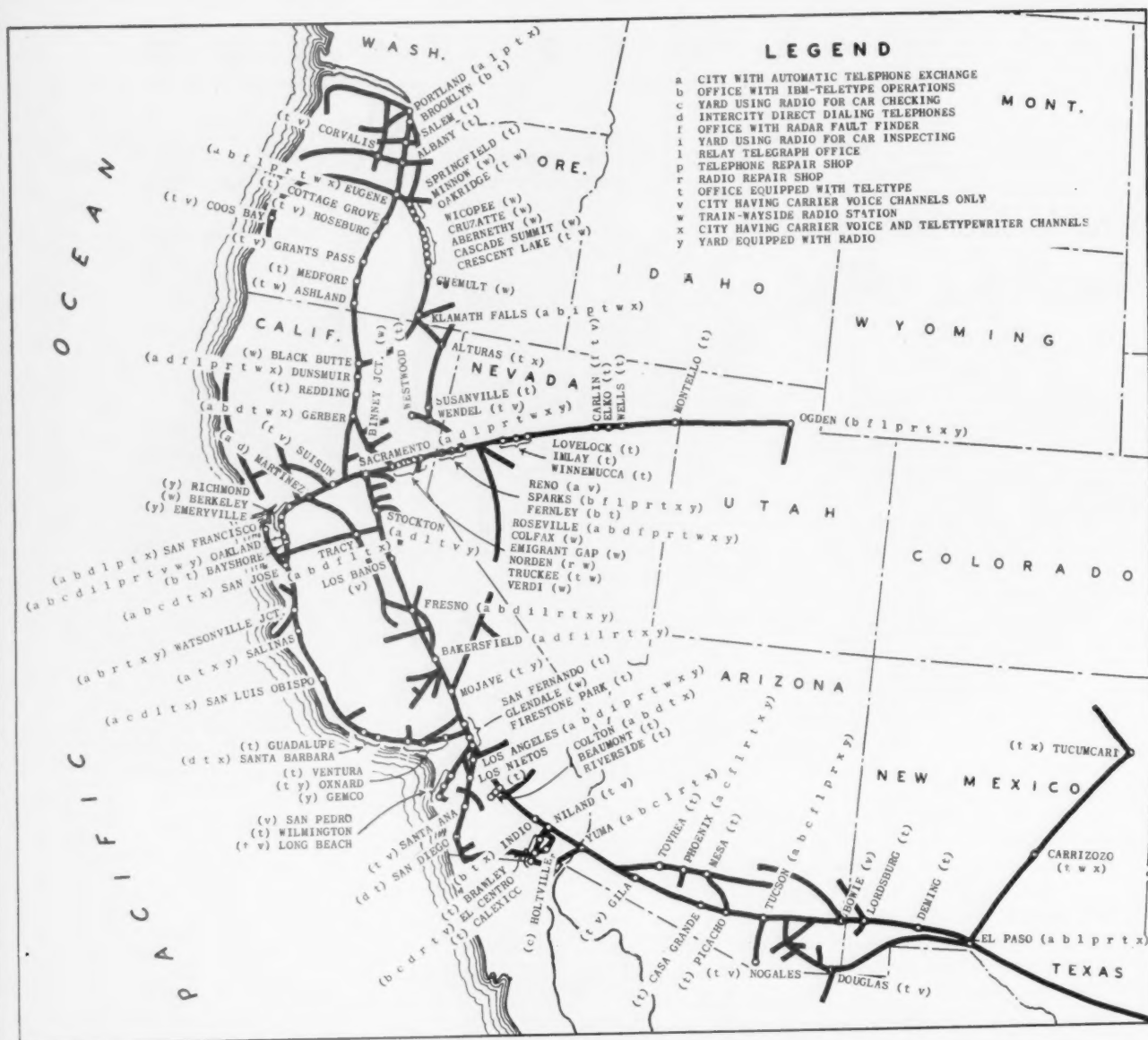
The standard of living advanced again when the motor truck came along—to take over a lot of hauling at which the railroads were not especially efficient. Consider a "peddler" freight train with, maybe, only 5 cars and an average of 10 tons of freight per car, with a crew of five men—or one man for each ten tons of freight. That isn't a very efficient variety of railroad operation. It *was* more efficient and faster than horse-drawn wagons used to be—but it is not as efficient or as fast as two or three men with two or three trucks would be, in "peddling" 50 tons of freight.

But trucks are not just handling the freight that they can haul more economically than the railroads can. There are, for example, many main highways in this country where a string of 50 or more long-haul trucks will pass by in an hour or so—each truck with its own driver. In other words, 50 men are working to provide no more transportation service than a 5-man train crew could provide on a parallel railroad, hauling all the freight that could be carried in 50 or 100 big trucks.

The train engaged in retail transportation and the flock of trucks engaged in long-haul, heavy-duty transportation—both represent waste of manpower and waste of capital. It is a good deal like trying to hoe a garden patch with a big bulldozer—and excavating for a cellar with a teaspoon. The nation does not increase its standard of living by this poor selection of transportation tools—it keeps its standard of living lower than it ought to be.

Why does such a wasteful selection of transportation tools so often occur? Simply because, frequently, rigid rate regulation does not permit the railroads to offer sufficiently attractive rates to long-haul, heavy traffic. The railroads could haul such traffic at actual costs far lower than the cost of truck movement—but, despite lower costs, the regulated railroad rates are often higher than the cost of truck movement. So 50 men are being used to do the work of 5.

It is the primary purpose of the so-called "Cabinet Committee" report on transportation to take away the regulatory handicaps which deflect transportation jobs into wasteful ways of handling. By urging more freedom of competition in transportation, the Cabinet Committee is trying to promote a system of pricing which will direct traffic to the most economical channels, reducing the total cost of transportation to the American people, and allowing them more money to spend on other things.



How SP Makes Communications Pay

Modern, up-to-date communications installed and being expanded on the basis of economy and improved service

Mechanization is being applied daily to communications on the Southern Pacific. Not only does this mechanization provide more efficient operation, but these modern systems are more than paying their own way. For example, a railroad expenditure of \$34,000 to provide automatic dial telephone service in railroad offices and shops at one location is saving \$22,000 annually in operating expenses.

By spending \$30,000 for carrier equipment, the

Southern Pacific replaced leased line circuits, thereby saving 31 per cent on the investment. Dollar savings have been accomplished by the use of radio both in yards and on trains.

"To meet competition, we must have first class communications," says A. E. DeMattei, superintendent of communications of the railroad's Pacific lines, west of El Paso, Tex. First class communications on the Pacific lines include:

- Freight car reporting system using punched-card and Teletype equipment linking 21 major yards and the general telegraph office in San Francisco.

- Teletypewriter network linking 116 on-line and 28 off-line offices.

- Railroad radio on freight trains for end-to-end communications and on all trains for train-to-train as well as dispatcher controls providing communications between dispatchers and trains through wayside stations.

- Radio in major yards and on switch engines providing instant communications between yardmasters and switching crews.

- Intercity automatic dial telephone system covering 70 per cent of the railroad.

- Talk-back and paging loudspeaker systems in yards for communication among yard personnel and yardmasters.

These are the systems now in service, which are continuously being expanded until they will cover the entire railroad, including the lines in Texas and Louisiana, where W. L. Fagley is superintendent of communications.

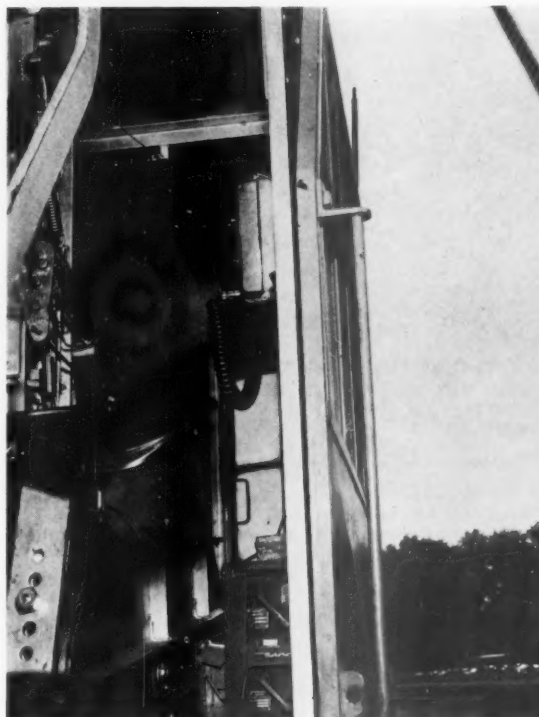
A Moving Inventory System

To fulfill the railroads' "place in the sun," the SP's Pacific lines communications department is organized into two major divisions—operations, and engineering and maintenance—enabling it to provide fast, accurate transmission of data so necessary in today's railroading. The operating division is concerned with the transmission, receipt and delivery of Western Union message traffic at SP stations; the operation of a system-wide printing telegraph network linking 116 on-line and 28 off-line offices including 21 offices where punched-card and Teletype operations originate or are carried on, and 18 on-line and two off-line relay telegraph offices; and a telephone system including 26 automatic telephone exchanges with 5,269 extensions.

The engineering and maintenance division is concerned with maintenance, engineering and installation work on 47,000 miles of line wire; 7,400 miles of pole line; 50,000 miles of Western Union line wire; yard and terminal pneumatic tube systems, yard "intercom" and paging, and local "intercom" systems; and carrier terminal equipment.

Thirty thousand car movements are handled daily over the SP's Pacific lines mechanized car reporting system. One-half hour after a train leaves a yard, the consist list is in the San Francisco telegraph office. For this operation, the SP has ordered four transceivers which "read" punch cards and send the information over communications circuits eliminating the necessity of transmitting the information by Teletype tape. Transceiver operation insures accurate transmission because the sending of an error stops the receiver, and causes it to send a signal to the transmitter for correction.

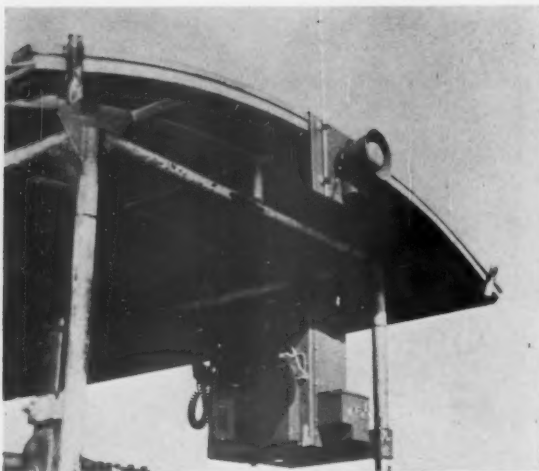
Semi-automatic relaying of Teletype message tapes is now performed at six relay telegraph offices—New York, Chicago, Los Angeles, Portland, El Paso and San Francisco. The operator takes the tape from the receiving reperforator and inserts it in a transmitter-distributor and presses a button for transmission. One operator, in the general telegraph office, now handles 26 reperforators and 38 transmitter-distributors sending up to 31 multiple message simultaneously. However, under fully mechanized operation (now being considered by the railroad), messages relayed through this office would be properly



RADIO on Burro crane (right of seat) enables the operator to inform . . .



FLAGMAN of crane's location. Using the semi-portable radio he can also contact other machine operators.



TIE TAMPER operator, too, can contact flagman who radios approaching trains of work equipment's location.

coded so that they would come in on a reperforator, and at the same time, would automatically be transmitted to the next office.

Don't Write—Telephone!

"When you are going to write a letter or send a telegram, use the telephone for economy—it costs less than your secretary's time," says Mr. DeMattei. For this reason, as well as fast communication—a quick answer—the SP has installed an intercity dial telephone system. Although the cost of intercity dialing has not been completely offset by the reduction in the operator force, Mr. DeMattei said: "We're not throwing any money away." Their first long-distance intercity automatic dial telephone system was placed in service between San Francisco and Sacramento, Cal., in November, 1953, followed six months later with a system from San Francisco to Los Angeles via the Coast and San Joaquin Valley lines.

By the end of this year, the system will be in service from Los Angeles to San Diego and Los Angeles to Yuma, Ariz. Also completed will be San Francisco to Sacramento to Klamath Falls, Ore., and Eugene, Ore. to Portland. The extension of the system in 1956 will cover the remainder of the railroad. The lines in Texas and Louisiana have likewise inaugurated a similar scheme which will provide long-distance intercity dialing from Houston and New Orleans to Pacific Coast terminals.

The Southern Pacific owns the intercity circuits and rents the subscribers' telephone sets and automatic exchanges from commercial telephone companies. An example of telephone usage is that the San Francisco-Los Angeles service originally required only nine telephone circuits, but now there are seventeen. The telephone system gets approximately two to three times more use with dialing than with manual switchboards.

More Circuits—Less Wire Mileage

By extensive use of carriers, the SP has created 75,000 circuit miles without stringing a mile of wire. With so many carrier circuits (telephone and telegraph) working



RADIO on lineman's motor car provides instant two-way communication with the Dunsmuir, Cal., wire chief.

on wire pairs, the need for rapidly locating and repairing wire breaks is essential. SP engineers "put their heads together" and came up with a radar fault finder (effective range up to 100 miles) that can tell, sometimes to the pole, where the wire is broken, crossed or shorted out. The first such instrument was placed in service in the Dunsmuir, Cal., telegraph office in 1949, and since then these fault finders have been put into nine other telegraph offices.

"Radio Has Become Commonplace"

SP policy is to equip all diesel locomotives with radio, and the road is rapidly working toward that goal with cabooses. Presently radio-equipped on Pacific lines are 322 diesels ("A" units and road switchers), 105 yard switch engines, 8 business cars and 127 cabooses.

The dispatcher radio system enables the dispatcher at his office to contact any train in his district. This is now in service in the Sierra Nevada (Sacramento-Sparks, Nev.) and Cascade mountains (Eugene-Crescent Lake, Ore.). The systems are to be placed in service over the Tehachapi mountains in southern California between Bakersfield and Mojave; between Los Angeles and Colton, Cal.; and between El Paso, Tex. and Tucumcari, N. M. The dispatcher radio control system from Sacramento also has a connection with the office of the general superintendent of transportation in San Francisco, enabling him to talk to train crews in an emergency.

At present, 27 wayside offices on Pacific lines alone are equipped with radio for train-to-wayside communication.

Radio is used extensively in yards, 18 being so equipped for instant communication between yardmasters and switch engine crews. Eleven yards use radio for car checking and five for car inspecting. The checkers and inspectors carry walkie-talkies. Thirty-six automobiles are radio equipped for such diverse users as superintendents (3), trainmasters (6), equipment installers (8), yardmasters (4) and crew callers (4).

This policy of providing communications wherever possible to save time and money has produced many new and often startling uses of radio. For example, radio



GENERAL TELEGRAPH OFFICE in railroad's headquarters in San Francisco handles 30,000 car movement reports daily.

communications played an important part in the day-lighting of tunnels and the reconstruction of the line through the Tehachapi mountains between Bakersfield and Mojave following an earthquake in August, 1952. Emergency radio stations were set up in the mountains to talk to Bakersfield and to work trains in the area.

Radio is saving time for a lineman working out of Dunsmuir, Cal. His motor car is radio-equipped, which enables the Dunsmuir wire chief to radio him about wire trouble as soon as it occurs, and tell him the location (from radar fault finder). The lineman receives the call promptly, and the wire chief doesn't have to wait for the lineman to call in when he is out on the line.

The use of radio on on-track work equipment has reduced delays to freight and passenger trains on the Sacramento division, where a Matisa tamper and a Burro crane have been radio-equipped. The flagmen with these machines are equipped with tripod-mounted radio sets. Snow fighting equipment in the Sierra Nevada and Cascade mountains is radio equipped, including eight rotary snow plows, seven flangers and five Jordan spreaders.

The SP has three ferry boats operating across San Francisco bay between Oakland and San Francisco. Each boat is equipped with two sets of radar and radio—one at each end of the "bridge." Eight business cars are also equipped with radio, these covering nearly the entire system.

TV Replaces Yardmasters' Towers?

There is a definite possibility that TV may make SP yardmasters' towers obsolete. Results of day and night testing of television viewing at Taylor yard in Los Angeles are being studied with the idea of applying a similar TV system at other points. Estimates are that a TV system with viewers in a groundfloor yardmaster's office could pay for itself in three to five years. The system under consideration will have as many as seven cameras with wide-angle lenses and five cameras with telephoto lenses providing general viewing and "on-the-spot" coverage of a two-mile long yard. To obtain the same supervisory control and viewing as that obtainable with television, the SP estimates that two yardmasters'

towers would be needed, one at each end of the yard. Thus the cost of the TV system is offset by the savings resulting from not building yard towers.

Microwave Is Weatherproof

Between Dunsmuir and Black Butte at the foot of Mt. Shasta in northern California, the SP is contemplating the installation of micro-wave. Emergency repairs to the pole line in this territory may take days or even weeks in the winter. Winds up to 100 mph and snow falling at the rate of $\frac{1}{2}$ ft per hr are not uncommon. This is probably the "worst-weather" section of the railroad. Microwave terminal stations would be at Dunsmuir and Black Butte, 25 miles apart, with a repeater station at Mt. Shasta, eight miles south of Black Butte.

Surveys have been made and the system will be installed as soon as management approves. The system will have 21 microwave channels with five channels dropped out at Mt. Shasta. Sixteen channels will provide through service for the dispatcher's radio system, telephone, Teletype service, CTC and standby. There will be 100 per cent standby (both microwave and power equipment) at the terminals and the repeater station with automatic changeover to standby when the normal set fails. This microwave system will replace the present signal and communications pole lines between Dunsmuir and Black Butte.

Planning the engineering and operational applications of communications equipment to coordinate its use with future installations is one of the basic controls of planning programs. For example, the multichannel telephone and Teletype carrier systems now being installed on wires can be applied to future radio and microwave installations. Planning schedules include one-, five- and ten-year programs. A five-year planning program being completed this year is a system-wide Morse to telephone conversion program.

Training systems now in operation for employees are on-the-job training for wire chief-mechanicians, brush-up shop training for linemen and equipment installers, and factory training for department personnel in radio and allied electronics.



COMMITTEE of Direction and Canadian Hosts.—Standing (left to right)—C. A. Williamson, electrical engineer, Texas & New Orleans; S. W. Marras, secretary, Electrical Section; E. G. Gehrke, secretary, Engineering Division; J. O. Fraker, superintendent diesel and electrical maintenance, Texas & Pacific; R. F. Dougherty, general electrical and air conditioning inspector, Union Pacific; H. P. Wright, electrical engineer, Baltimore & Ohio; C. R.

Bland, assistant electrical engineer—rolling stock, Chesapeake & Ohio. Seated—H. F. Finnmere, chief electrical engineer, Canadian National; K. H. Gordon, assistant electrical engineer, Pennsylvania; R. I. Fort, electrical engineer—equipment, Illinois Central; S. B. Pennell, assistant engineer, New York Central; A. E. McGruer, engineer of electrical equipment, Canadian Pacific. Meeting was held at Montreal, June 21-23.

Electrical Section's Work Tempo Up

Automation as it applies to railroads is becoming largely the responsibility of electrical engineers

It was pointed out by one general superintendent of motive power at the recent annual meeting of the AAR Electrical Section in Montreal, June 21-23, that the percentage of electrical men in his department has increased from 12 to 24 per cent in the past 10 years. Since total mechanical and stores department employees on many railroads have declined in number about 50 per cent during the same period, the statement is significant. It seems evident that the electrical men are in large measure responsible for much of the automation which has so greatly reduced railroad manpower requirements and costs.

A smoother flow of work through a diesel shop would result if locomotives were shopped according to time intervals rather than by mileage or fuel consumption, it was suggested. While the latter are more accurate measures of work done and corresponding wear, the time interval conforms with inspection requirements and allows for better shop scheduling.

Too close writing of specifications for wire and cable was questioned. If specifications are too tight, the manufacturer's opportunity to improve his product are limited.

One report presented at the meeting shows that a shop having a capacity for 10 locomotives may be built for \$127,000 while one for 20 locomotives will cost \$243,000. Complete tooling for shops is incorporated.

It has been determined that high voltage d-c testing of electrical equipment is less destructive than a-c test-

ing, and can indicate breakdown before it happens. One committee is making an extensive study of this procedure to determine if insulation life can be prophesied.

The use of sprayed metal for building up wearing surfaces has been studied intensively. It appears that if proper procedure is followed religiously, it may outwear the original metal. Sprayed metal is porous and retains lubricant.

The potentials of electronic track scales are being developed by one committee. Successful development would greatly simplify the weighing problem.

One speaker called for diesel locomotive electrical equipment which is impervious to oil and water. This is a large order, but progress in this direction is being made.

Air Conditioning Failures

In studying the cause of car air conditioning troubles, one group discovered that records kept of the performance of 1,000 cars showed that 20 per cent of the cars were responsible for 75 per cent of the air conditioning failures. This has helped to pinpoint causes.

It was resolved that car batteries should have a capacity to provide four hours' protection in the event of a detention of long duration.

It was reported that a detailed study of snow removal from track switches by means of electric heaters indicates

that when the annual need is in excess of 200 hours, the annual recurring expense for 1,000 ft of switch length is much lower for electric than for other methods of snow removal.

It would seem that the railroads have some undeveloped opportunities for obtaining new traffic if consideration is given to the relative costs of transmitting electric power and shipping coal. One report at the meeting states that in relatively few cases, under present conditions, can long distance electric power transmission, even at very high voltage, be justified on the basis of competition with coal transported by rail.

Corrosion of buried metal costs railroads millions of dollars a year. Complete specifications for protecting oil storage tanks are included in one report and an elaborate system of buried metal is also described.

It is now fairly evident that by far the greater number of all cabooses will eventually be equipped with communication equipment and the necessary power supply. There are now 24,168 cabooses owned by American and Canadian roads, but only 2,398 are so equipped.

Values of illumination accepted for drafting rooms only a few years ago are now considered totally inadequate even for shop lighting. The section can now show how new lighting developments and higher intensities are being used advantageously. Some of the new applications of light are detection of oil leaks by ultraviolet light and lighting for television as used for night checking car numbers in yards. New types of fluorescent lamps are now available for operation in low outdoor temperatures.

Probably the most unapproachable subject dealt with by the section is the standardization of wiring diagrams. There are so many forms that standardization has been considered impossible, but evidently nothing is impossible to someone with sufficient determination. The work being done by the committee handling this subject is designed to eliminate much confusion and unnecessary drafting room work.

Future Electrification

Future applications of railroad electrification are foreseen by those who are studying the subject. This, it would appear, is to be governed in considerable measure by relative future prices of electric power and diesel fuel oil. Developments such as the use of 60-cycle power at high voltages also seem to afford electrification some new advantages.

An important announcement at the convention disclosed that the Electrical Section will again meet with the Mechanical Division in Chicago, in June 1956, and that exhibits will be sponsored by the Railway Electric Supply Manufacturers Association. For the electrical suppliers, this is an opportunity without precedent.

Election of Officers

Officers elected to serve during the coming year were as follows: *Chairman*: K. H. Gordon, assistant electrical engineer, Pennsylvania; *vice-chairman*: S. B. Pennell, assistant engineer, New York Central; *members, Committee of Direction*: E. J. Feasey, general supervisor, diesel equipment Canadian National, and J. J. Schmidt, electrical engineer, Denver & Rio Grande Western.

Benchmarks and Yardsticks

A noted clergyman, in a recent address, discussed some of the criticism that other men of the cloth have directed at some of the "popular preachers." There are several of these men, who seem to be able to command attention from millions of people who do not ordinarily listen to preaching. It is a source of offense to some clerical people that others of their brethren should be attracting wide audiences by methods not heretofore recognized as safely ecclesiastical, however effective in popular appeal.

This commentator asks: "Isn't there enough to attack, in the cynical paganism, the unblushing materialism, of the world outside the churches, without our taking quite so much time and energy for intramural strife?"

This observation might be made with equal propriety of the railroad industry. There are plenty of mistakes made by railroad men—which afford convenient and interesting subjects for conversation by other railroad men. However, is adverse comment about people's shortcomings the best way to correct these shortcomings? And does persistent criticism of other people do the critic himself much good?

There is an old saying to the effect that it is more profitable for a man to spend his time on his own faults—which he is in a position to do something about—than in drawing attention to the mistakes of others, about which the critic can do nothing.

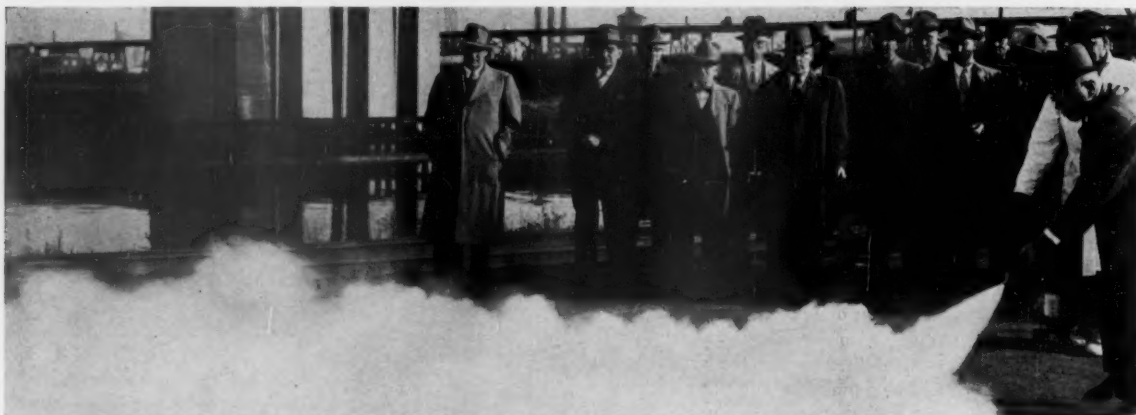
There are undoubtedly clergymen who are badly off the beam—and who well might cause concern to their brethren. But the fact that a spokesman for virtue and self-improvement has a popular following ought to redound to his credit, rather than otherwise. There isn't much advancement for moral and psychological improvement in a speaker on these subjects who cannot persuade anybody much to listen to him.

In the railroad business, it is practically impossible for a man to get into a position of responsibility without at least some ability. As a strictly practical matter of effective method—in getting practices improved, isn't it usually more to the point to draw attention to the fellows who are doing a good job, rather than to devote so much critical attention to those that aren't?

People in every walk of life, including railroading, usually are not slow to imitate the actions of those who are successful. No negative reactions are set up against the man who bestows praise—such as usually work against the fellow who is quick on the critical trigger. It is usually a counsel of wisdom—from a man's own selfish standpoint—to be alert to praise and slow to find fault.

J.G.L.

Good Practice in Bad Weather . . .



MR. WILDRICK DEMONSTRATES for a class the proper use of a dry-chemical fire extinguisher.



A PUMP WATER EXTINGUISHER is used by Lt. John Berichon of the Cleveland fire department.

INTENSIVE PROGRAM OF EMPLOYEE TRAINING—THAT'S . . .

How Erie Reduces Fire Losses

By F. B. WILDRICK
Superintendent of Property Protection
and Fire Prevention, Erie

Fire losses on the Erie have been sharply cut as a result of a two-pronged educational program. One phase of the program is designed to teach employees how to recognize, and eliminate, fire hazards. In the other phase, employees are taught what fire-fighting device is the proper one for any situation, and precisely how the device is operated.

The Erie's program was based on the conference method. A conference was held at each of four points along the line, sites being chosen to permit maximum access by employees. Most attended without being away from their posts overnight; no one was away more than one night.

Procedure at each conference was the same: First, an

indoor morning demonstration was given, then one outdoors. Two complete sets of empty hand extinguishers were provided, including the six more common kinds: Water-pump, soda-acid, foam, carbon-tetrachloride, dry chemical, and carbon-dioxide. The conference opened with an address by the chief of the local fire department, or his representative, which stressed the two basic points of the program.

Contents of various extinguishing agents, as well as the meanings of certain terms common to fires and fire fighting, were explained to the audience. The lack of danger in using the extinguishing agents was demonstrated by putting carbon tetrachloride on clothing, blowing carbon dioxide on the hands, placing dry chemical in the mouth. This procedure helped accustom the group to various materials and procedures.

(Continued on page 60)



STRINGS of flat cars, appearing as continuous platforms as far as the eye can see, are placed against concrete end-

loading ramp in foreground. This view is of Chicago terminal during night loading.

PENNSYLVANIA BUILDS SPECIAL

Terminals for "TrucTrains"

Two new facilities handle trailers of common carrier truck lines moving "piggyback" in special trains between Chicago and New York

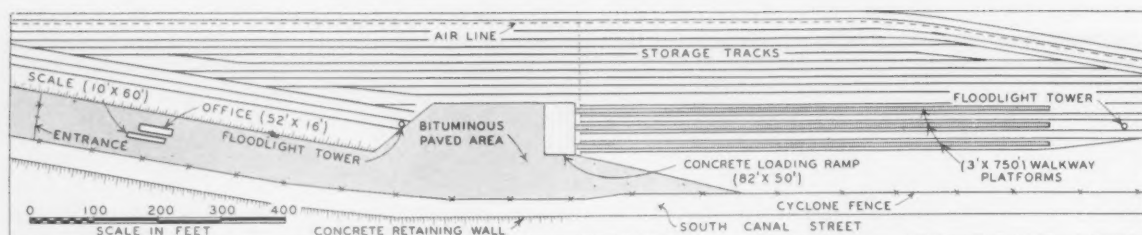
Tailor-made best describes the Pennsylvania's all-new piggy-back terminals now in operation at Chicago and at Kearny, N. J., in the New York metropolitan area.

The two terminals provide complete facilities for parking, weighing, loading and unloading trailers. They are designed for handling the trailers of common-carrier truck lines moving between Chicago and the New York area in the Pennsylvania's new "TrucTrain" service. The trailers move in special trains departing nightly, Monday through Thursday, and at 6:00 p.m. on Saturday from the two terminals, and providing second-morning delivery at the opposite terminal.

Although built by the Pennsylvania, the terminal facilities are operated by the Rail-Trailer Company. Rail-Trailer employees provide weighing, loading, unloading and related services at both terminals. Each terminal has track capacity for placing at the end ramps upwards of 60 specially built 75-ft flat cars (*Railway Age*, May 23, page 31) at one time. Two trailers are carried front-to-back on each car. The two terminals differ somewhat in specific design details (see plans); however, they are basically the same in that each provides permanent facilities for end-loading of trailers onto strings of flat cars.

Each terminal has six stub-end tracks for the flat cars. At the ends of the tracks permanent ramps extend from the ground level up to the car floors. At Chicago there is a continuous ramp serving all six tracks, while at Kearny three individual ramps were constructed, one for each pair of tracks. The ramps at both terminals are constructed with reinforced concrete retaining walls on three sides to hold fill material. At Chicago the incline is paved with concrete; at Kearny the inclines are paved with bituminous material. At both locations, wood walkways for workmen are placed between alternate tracks. The walkways are at car-floor height and extend the entire effective length of the yard tracks.

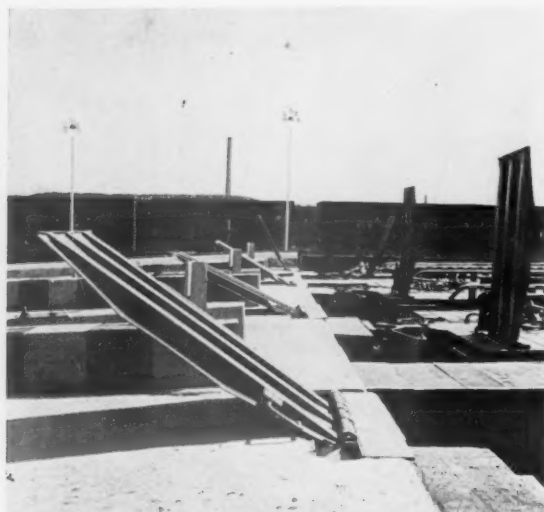
To bridge the opening between the cars, and between the end cars and the ramp, when loading and unloading trailers, the special cars are fitted with a hinged ramp plate at each end, wide enough to accommodate the wheels on one side of the trailer and tractor. The plates on one end of the car are on the opposite side from those at the other end. When not in use, the plates are raised to a vertical position and locked in place. At the loading ramps the plate on the car next to the ramp is lowered onto the ramp to provide a bridge for one set of trailer



CHICAGO TERMINAL layout provides six tracks with a total capacity for 60 flat cars. A continuous concrete load-

ing ramp serves all six tracks at this terminal. Walkways at car-floor height extend effective length of tracks.

Some Tips on Construction . . .



RAMP PLATES, hinged to the concrete loading ramp and to the ends of cars, provide . . .

wheels. At Chicago, plates for the other sets of trailer wheels are permanently attached to the ramp so that they can be raised and lowered to and from the ends of the cars.

At Kearny the ramp plates are not attached, but are picked up and laid across the openings, then set aside when not in use.

The Kearny terminal is adjacent to the PRR Meadows yard, across the Hackensack river from Jersey City. Tracks for the terminal were formerly a part of the yard facilities, but had not been in general use for several years.

Access to the loading ramps is provided by a paved driveway from Pennsylvania avenue, which runs along the south side of the facility. An office and a truck scale have been placed along this drive.

The office is a 16- by 51-ft prefabricated steel building; and the scale, located immediately alongside, is a standard 10- by 60-ft unit. Weighing and recording equipment for the scale is inside the office. Large window areas along the scale side of the building afford a good view of the scale and driveway. A frame structure over the scale checks the overhead clearance on each trailer as it pulls onto the scale. If a trailer passes under the structure without touching it, then the trailer will meet railroad overhead-clearance requirements when it is loaded on a car.



. . . BRIDGES for gaps. Plates are attached on opposite sides at ends of each car and at ramp.

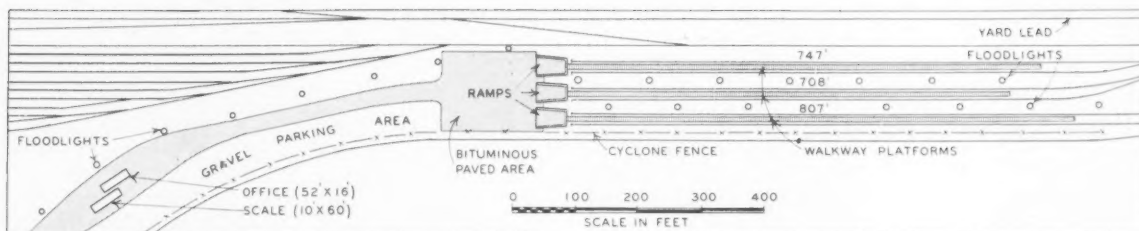
A trailer parking area extends along the entire length of the driveway, and in the vicinity of the loading ramp there is a large paved "turnabout" area. Along the street side the terminal is enclosed by an industrial-type chain-link fence.

During the night the entire facility is brightly illuminated by mercury-vapor floodlights on wood poles at intervals around the area. Electrical receptacles along the walkways between tracks supply power for portable floodlights used by workmen.

Arrangements at Chicago

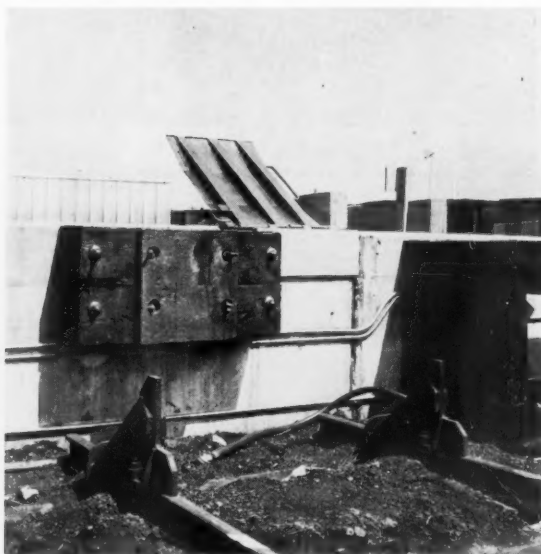
The Chicago terminal is adjacent to the PRR Fifty-fifth street yard. Loading tracks for the terminal were formerly a part of the yard. Located just south of Forty-seventh street, the facility is bordered on the west by South Canal street and is enclosed along the street side by an industrial-type fence similar to that used at Kearny. At 30-ft sliding gate at the north end provides entrance to the terminal area.

The entire driveway, trailer parking and "turnabout" area between the entrance and the trailer-loading ramp is paved with a bituminous surface. A short distance inside the entrance are an office building and truck-weighing scale similar to those at the other terminal. One variation in the scale arrangement are concrete curbs, about



KEARNY TERMINAL also provides six tracks with 60-car capacity. Tracks are paired in this case, however, each pair

being served by individual ramp with bituminous-paved incline. Floodlight poles are located between pairs of tracks.



ENDS OF TRACKS are equipped with wheel stops and steel and wood bumpers.



TERMINAL OFFICE is a prefabricated steel building. Scale platform with lighted concrete curbs is alongside. Structure in foreground checks for overhead clearance on trailers.

2 ft high, along each side of the scale. These curbs serve as a guide to drivers when pulling onto the scale and facilitate centering trailers on the scale platform. For use during night operations, lighting fixtures are recessed into the concrete at intervals along each curb.

In addition to three mercury-vapor street-type lighting fixtures along the entrance driveway, the terminal area at Chicago is lighted by two 70-ft floodlight towers, each with a battery of 24 lights at the top. One of these towers is north of the loading tracks, the other south. Six light poles are placed on each side of the loading ramp. Each pole has five floodlights, giving a near-daylight effect in the vicinity of the ramp. As at Kearny, electrical receptacles are located at intervals along the walkways for plugging in portable floodlights used by workmen when tying down the trailers.

How Service Operates

The procedure for handling trailers at the terminals is as follows:

1. The trailer is brought to the terminal by the tractor of a common-carrier truck line, which pulls it onto the scale for weighing.
2. The truck driver parks the trailer in the lot, uncouples his tractor and leaves.
3. The Rail-Trailer Company's loading tractor, spe-



INTERIOR OF OFFICE provides weighing and recording equipment and facilities for handling and billing and related work. The terminal facilities, although built by the Pennsylvania, are operated by the Rail-Trailer Company whose employees provide all weighing, loading and unloading facilities at both the Chicago and Kearny terminals.

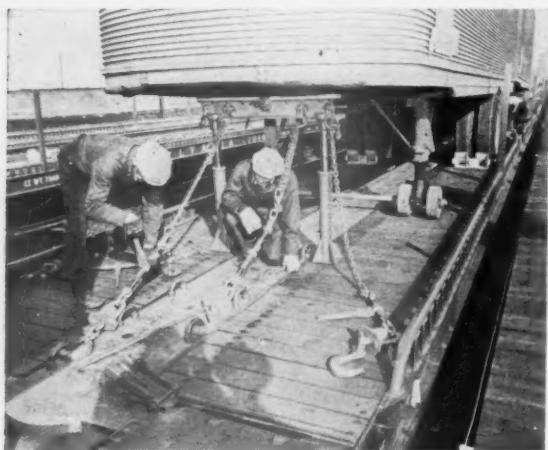
How Trailers Are Loaded . . .



SPECIAL TRACTOR backs trailer up loading ramp and onto the first flat car, thence down the . . .



. . . **STRING** of cars to the last available space. Tractor then uncouples and goes to pick up next trailer.



LOADED TRAILER is secured to car deck by special anchoring devices which require no brackets on trailer.



TRAINLOAD of trailers leaves Chicago for the 29-hr journey to the Kearny terminal.

cially equipped with a hydraulic lifting device on its coupler, hooks onto the trailer, backs it up the loading ramp and down along the string of flat cars to the end.

4. The tractor is uncoupled from the trailer, and driven back down the entire string of cars to bring up another trailer.

5. The loaded trailer is secured to the car deck with special anchoring devices, which do not require the application of any securement or attachment brackets on the trailers.

6. When all of the trailers have been loaded for a night's run, the PRR takes over. The trailers, which have already been inspected by Rail-Trailer personnel as to suitability for rail transport, are checked by rail inspectors, with particular attention to the proper application of the anchoring devices. The cars are then made up into a complete train to begin the 29-hour run to the other terminal.

7. Upon reaching the terminal at the other end, the trailers are unfastened, removed from the cars by the special tractors and turned over to the common-carrier truck lines.

The "TrucTrains" moving between the two metropoli-

tan terminals have no speed restrictions placed upon them other than the normal 50-mph maximum limit for freight trains. The special flat cars are equipped with roller-bearing high-speed trucks and cushioned draft gears, with the thought that they may be operated eventually at speeds of 60 mph.

Foresee Increase in Traffic

The trains are currently operating with an average of 30 trailers daily in each direction, increasing to upwards of 70 each way on the trains departing Saturday. Both railroad and Rail-Trailer officers foresee a substantial volume of this business as the common-carrier truckers become more familiar with the service. When the terminals handle more than their one-car-placement capacity of 120 trailers each way per day, switching of the stub-end ramp tracks will be required during the course of each day.

The Pennsylvania's confidence in the future of its "TrucTrain" service is evidenced by the fact that an additional 220 of the special "piggyback" flat cars are to be built at its Altoona (Pa.) shops.



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OAKITE **RUSTRIPPER**

for *ALKALINE* de-rusting of precision parts

Check these BIG advantages

- Oakite **RUSTRIPPER**
will not attack sound metal
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avoids hydrogen embrittlement
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needs no special stainless steel equipment
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gives off no troublesome fumes
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strips paints as it de-rusts
- Oakite **RUSTRIPPER**
saves work and tank installations because it strips paint, removes grease and de-rusts in ONE operation.

Another new Oakite material for you—Oakite RUSTRIPPER. It's specially designed for alkaline de-rusting of precision parts where dimensional change and hydrogen embrittlement must be avoided.

Oakite RUSTRIPPER, heavy duty triple-purpose material, eliminates operations; saves equipment cost and upkeep. It strips paint and removes thick grease as it derusts. Oakite RUSTRIPPER comes in easy-to-handle powder form. It may be used in hot or cold solutions.

Oakite RUSTRIPPER does not contain cyanide and may be disposed of in the same manner as any highly alkaline solution.

If you would like to know more about Oakite RUSTRIPPER or would like a demonstration without obligation write Oakite Products, Inc., 46 Rector Street, New York 6, N. Y.

OAKITE

RAILWAY DIVISION

NEW FROM CATERPILLAR!

**TWO MODERN,
COMPACT,
HEAVY-DUTY
RAILROAD DIESELS**



**THE NEW
D342**



**THE NEW
D339**

190 HP

171 HP

152 HP

INTERMITTENT OUTPUT

Maximum recommended for loads of short duration (1 hour or less) with equal periods at idle or low load.

RATED OUTPUT

Maximum recommended for loads of moderate duration (12 hours or less) with equal periods at idle or low load.

CONTINUOUS OUTPUT

Maximum recommended for loads of unlimited duration.

All at 1200 r.p.m. with full equipment

126 HP

112 HP

100 HP

This is the same trouble-free engine which powers Caterpillar's mighty D8 Tractor. Coming soon: the new D342 Electric Set!

Balancers—standard equipment on the new D339—give this powerful 4-cylinder engine all the smoothness of 6-cylinder performance!

Here are the latest advances in diesel engine design. Compared to other engines in their class, these two new CAT* Engines offer you better operation, less maintenance, higher horsepower and more compact design. Take a quick look!

CHOICE OF STARTING SYSTEMS!

AIR

For fast starts where a supply of compressed air is readily available, a sturdy vane-type air motor is offered. Also available: air compressors and storage equipment.

ELECTRIC

Where speed of starting is especially important. Also available: automatic start-stop controls which require no operating personnel.

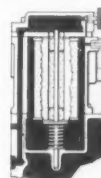
GASOLINE

For all-weather starting. This system preconditions the diesel, and supplies full lubrication before diesel is started. Also available: electric starters for the gasoline starting engine.

ECONOMICAL FUEL SYSTEM!



Same famous tinker-free fuel system so successful on other Caterpillar Engines. Capsule-type injection valves with single, large, foul-proof orifices, plus special precombustion chambers, permit these engines to operate—even idle—on low-cost non-premium fuels. And full-flow filtering is assured with new paper-type element that is not affected by water.



FIELD-TESTED PISTON ASSEMBLIES!



Pistons, rings and rods in these two new engines are like those used in Caterpillar's famous V-type Engines. Heat plugs, chrome-faced rings, cast-iron top ring bands give thousands of hours of operation before inspection is necessary.

MANY OTHER IMPORTANT FEATURES!

BRIEF SPECIFICATIONS

D342	Four-cycle, valve-in-head	D339
6	Number of cylinders	4
5 3/4 in. x 8 in.	Bore and stroke	5 3/4 in. x 8 in.
1246 cu. in.	Piston displacement	831 cu. in.
1200	Rated speed, r.p.m.	1200
425	Low idle speed, standard, r.p.m.	425

Your Caterpillar Dealer has full details on both of these compact, new engines. Call him today for modern heavy-duty diesels. And remember him, too, for prompt, complete installation and service.

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We'd be glad to send you more information on the new D342 and D339. Just mail the coupon below.

CATERPILLAR TRACTOR CO., Dept. 8594,
Peoria, Illinois, U. S. A.

Send me complete details on the new D342 and D339.

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Address _____

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EXAMPLES OF CATERPILLAR
LEADERSHIP IN ACTION

How talks its way

**to higher efficiency & service
with 2-way radio**

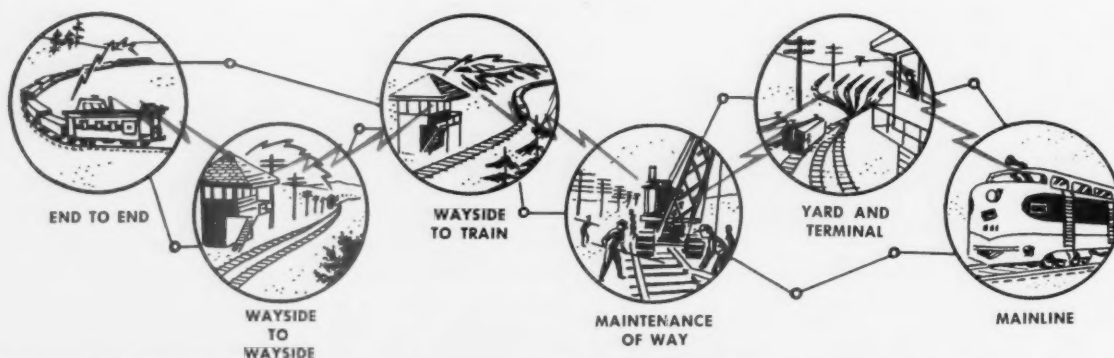


Speeding freight movements through switching yards, or moving mainliners over the High Sierras, Southern Pacific is using Motorola Railroad radio to its maximum effectiveness.

Today, every important cog in Southern Pacific communications operations and maintenance shares the many benefits of Motorola Station, Mobile, or Portable radio equipment.

On *your* railroad too, the gains will more than pay for the equipment in the first few months of use—but be sure to call in your Motorola engineer and get the facts from the pioneers and world leaders in radio communications. Write, phone or wire TODAY.

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4501 Augusta Blvd., Chicago 51, Ill.



The vast radio system of the Southern Pacific railroad covers every mainline operation. All passenger engines are equipped to enable them to contact the wayside operators. Freight locomotives and cabooses have end-to-end communication as well as contact with wayside operators.



The Southern Pacific Radio System includes three Mainline Radio operations, with dispatchers positions, similar to this picture, at Sacramento, Calif., Dunsmuir, Calif. and Eugene, Ore. In these districts, it is possible for the dispatcher to utilize radio to assist in movement of trains under his jurisdiction.



One of Southern Pacific's radio stations at Norden, Calif., a typical "trouble spot" in the mountains where heavy snowfall is an annual occurrence. This is part of the Maintenance System from Sacramento to Reno.



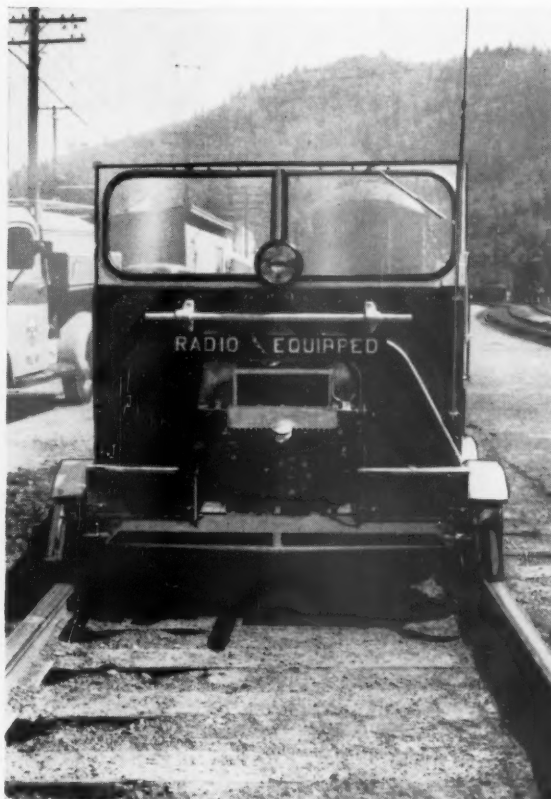
Southern Pacific operator at Norden snowshed near the Donner summit of the Sierra Nevada mountains, can use radio to talk with other stations or his dispatcher in emergencies, or with trains and snow clearing equipment equipped with the mobile radios. Beyond the window can be seen the front of a rotary snowplow awaiting orders to proceed out into the storm.



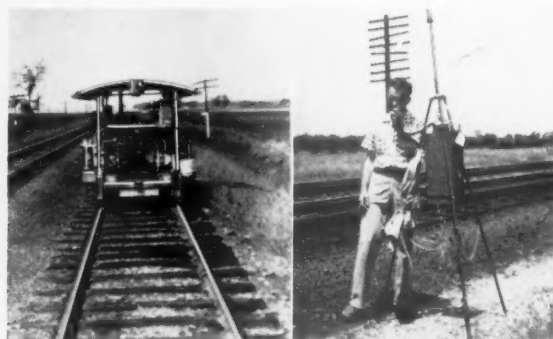
Radio enters the fight against snow. In both the Cascades and the Sierras, snow plows are radio equipped for constant contact with wayside operators. Speed of the plows is regulated by radio contact with the pusher locomotive propelling the plow.



The Southern Pacific has extensive yard and terminal radio installations all over the system. Radio finds application in car checking and inspection as well as switch engine direction. Less time lost in yards and better customer service are just a few of the dividends.



Radio on a motor car is one of the latest installations on the Southern Pacific. Not only does this make for safer operation for motor car personnel, but the ability to reach the maintainer improves his operation.



Use of radio in maintenance of way operations is saving time every day on the Southern Pacific. Communication by radio produces better utilization of the "on track" gear and fewer train delays.

MOTOROLA

2-WAY RAILROAD RADIO

MOTOROLA COMMUNICATIONS & ELECTRONICS, INC.
A SUBSIDIARY OF MOTOROLA, INC.
4501 AUGUSTA BOULEVARD • CHICAGO 51, ILLINOIS
ROGERS MAJESTIC ELECTRONICS LTD. TORONTO, CANADA



Motorola consistently supplies more mobile and portable radio than all others.

Proof of acceptance, experience and quality.

The only COMPLETE radio communications service—

specialized engineering . . . product . . . customer

service . . . parts . . . installation . . .

maintenance . . . finance . . . lease.

"The best costs you less—specify Motorola."

Move your freight cars with trouble-free

How R-S Journal Stops and Satco lining metal can reduce journal box servicing and maintenance requirements . . . can speed up train departures and eliminate need for servicing en route.

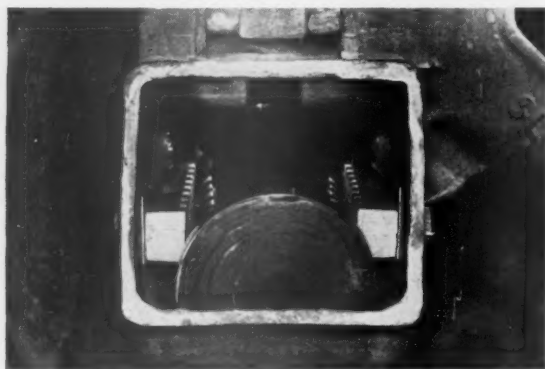
SATCO and R-S Journal Stops make the conventional waste pack an efficient lubricator. They give better bearing performance at the same time they reduce existing maintenance and servicing requirements. They eliminate old problems and *do not add any new ones.*

Equip all cars in a consist with Satco and Journal Stops and journal box inspection could be on a periodic basis — would not be required after each humping or switching operation.

The reasons: First, you seldom have to adjust packing and actual adjustment takes less time; second, you keep

more oil in the packing, get constant lubrication; and third, bearings run cooler increasing vital oil film thickness.

R-S Journal Stops keep the packing right where it belongs — 1" below the journal center line. Time and again road service tests with Journal Stops have proved that packing is undisturbed even after trips of 5000 miles or more. Without R-S Journal Stops, whenever there's a road or switching impact, or heavy brake application, you force the axle out from under the bearing. That crushes the dust guard, forces the box to rise, and squeezes the packing against the bottom of the journal — squeezes the



View of R-S Journal Stop installation with box jacked and bearing, wedge and packing removed. Note shims which permit maintaining nominal clearance on undersize journals.



Two of bearings removed after 38 months service in freight car equipped with R-S Journal Stops. All bearings were in such excellent condition they were reapplied. Crown has extended to point where it is wider than required for "fitted" bearings — but lining has not overrun.

MAGNUS METAL CORPORATION

TO DESTINATION

journal boxes!

oil out of the packing, too. This loose oil is free to splash out the back or front of the box—sometimes does before it can be reabsorbed.

Journal Stops prevent all that. For more miles than necessary to cross the country, you can maintain oil-to-packing saturation ratios of better than 2.75 to one—more than adequate to lubricate efficiently. And because you don't compress the packing, you maintain constant journal-to-packing pressures—assure a constant feed of oil to the bearing.

WHAT SATCO CAN DO

Use Satco-lined bearings and R-S Journal Stops, and you lick the major problems that lead to bearing troubles. Bearings run about 20° cooler on Satco. You get lower operating temperature, higher operating oil viscosity, and a thicker film of oil. That all adds up to increased operating safety and better bearing performance.

Satco has a melting point 150° higher than standard AAR babbitt. It's harder and stronger at elevated temper-

atures. In the laboratory and on the road Satco has actually been run at temperatures of 400° F. with no effect on the bearing. That means high resistance to lint wipers and thread risers.

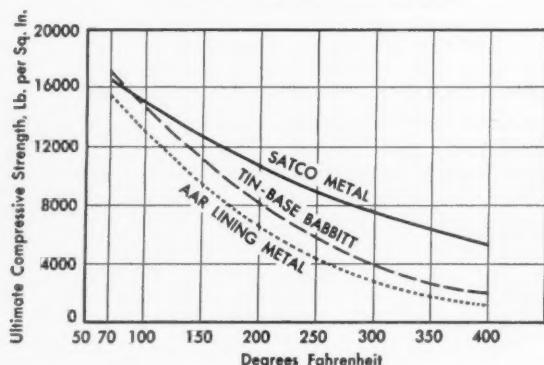
DYNAMIC LOAD FACTORS AND BEARING LIFE

R-S Journal Stops reduce dynamic load factors and Satco takes the toughest load you'll have. With Journal Stops the bearing always takes the load in the crown where it should, and Satco's extra strength at high temperatures assures added resistance to both wear and load. That means far longer bearing life—no spread linings, no cracked or shelled-out linings.

With Journal Stops you also get reduced and more uniform wheel flange wear, and the prospects are for reduced center pin wear and a lower mortality rate for coil springs. In fact, you cut truck maintenance costs all along the line—get big savings for a very small investment.

Of all the many developments designed to reduce hot boxes, R-S Journal Stops and Satco are the only ones which require no special maintenance or precautions and introduce no new problems to car servicing forces. They put the selection of any alternate type lubricator on a purely economic basis. Also you still have all the other advantages which low-cost solid bearings bring to railroad rolling stock. You can take the maximum load, and make the fastest schedule. Lading gets the smoothest ride. You save excess dead weight per car and get the lowest running resistance in pounds per ton. Best of all, you'll be sure of the kind of bearing performance you want at the lowest possible cost. Magnus Metal Corporation, 111 Broadway, New York 6; or 80 E. Jackson Blvd., Chicago 4.

ULTIMATE COMPRESSIVE STRENGTH
AT NORMAL AND ELEVATED TEMPERATURES



Ultimate compressive strength of Satco is higher at elevated temperatures but approximately same as other lining metals at starting temperatures. This assures high degree of conformability.

MAGNUS
Solid Bearings



Subsidiary of **NATIONAL LEAD COMPANY**

ERIE'S REDUCED FIRE LOSSES

(Continued from page 48)

Even the loud noise made by a carbon-dioxide extinguisher was demonstrated, so the men would know what to expect when using such a device.

An expert in construction and use of fire extinguishers next addressed the group. Using a blackboard, he pictured the elements of a fire, as well as the different classes of fires. Extinguishers were dismantled, part by part, to show how each works and for what class or classes of fire it is suitable. The expert told what to look for when examining extinguishers to see if they are in proper condition. He also indicated the best locations for extinguishers so they are quickly and easily accessible when needed.

Each member of the audience was given printed matter describing various types of extinguishers, their capacities, kind of charge, methods of expelling extinguishing agents, their maximum ranges, susceptibility to freezing, and methods of operation.

After a question-and-answer period, the students lifted and handled each of the extinguishers exhibited, operated it in a "dry run" to become accustomed to its weight, grip, method of release, and other characteristics. This was done under supervision of an experienced operator at each extinguisher, who watched for and immediately corrected any mistakes in handling.

The afternoon session was held outdoors. A second set of extinguishers—this time loaded, however—was provided. Fires of different classes were built in cartons, pails, tubs, crates, and on the ground, and every participant was required to use each type of extinguisher on each class of fire. Fuel was replenished and fires relit until every man had had his turn at them. Results of using the wrong type of extinguishing agent on a fire also were demonstrated, e.g., using water on a gasoline fire, which caused the fire to spread.

Some outdoor classes purposely were held in extremely cold and windy weather to emphasize the need for quick action in battling fires and to show how fast fires can develop. They also demonstrated difficulties of handling fire-fighting equipment under adverse conditions. For example, dry chemical and carbon-dioxide vapors can be blown aside by the wind; water units can freeze.

The conference groups consisted of men drawn from various departments of the railroad, particularly those charged with testing or recharging extinguishers, members of fire brigades, fire chiefs, and department supervisors. All "students" were asked, when they had returned to their posts, to teach other employees the things learned at the meetings. The "on-the-job" teachers are directed to submit names, occupations and working hours of the men they instruct, so an exact record can be kept.

Throughout the Erie emphasis has been placed on the fundamentals of fire-fighting. Employees must learn how to use a fire-alarm box and how to operate a fire extinguisher and a fire hose. Employees must know where the alarm boxes and fire-fighting equipment are. Every one is made to realize the importance of calling the fire department at once and then battling the fire with everything available. The more men and equip-

ment that can be brought into use, the better. The greater the attack, the quicker the fire will be put out.

Any fire-fighting program presupposes that available equipment is ready for instant use at all times. Constant checkups are necessary to insure this. An extinguisher may be used and then replaced, instead of being set aside for reloading. Such an extinguisher is a double liability; not only is it of no use, but the time lost in going for it and finding it useless takes precious moments that could have been spent in getting other equipment. The first two minutes of a fire is the time to check it; this takes fast action with the right equipment ready for instant and effective use.

So extinguishers may be available for effective use, Erie men learn the following requirements are vital: Check them regularly for leaks, cracks, loose rivets and outlets that may be cut, broken or plugged; see that extinguishers are loaded and that no foreign liquid or material is in the contents; place them near the most likely danger spots; post extinguishers just outside the door of places where paint and oil are stored; hang extinguishers at convenient heights.

An inventory of Erie fire extinguishers revealed a great variety in makes, types and sizes, leading to revision of stockbook sheets to provide that future orders would be for only the necessary devices. All requisitions for fire-fighting equipment must have Property Protection Department approval before purchases are made. Special care is taken to insure that containers are properly labeled so the wrong-type liquids do not get into fire extinguishers.

A special program has been developed outlining procedures in the case of fires on second, or higher, floors. This includes a written outline of the duties of each individual. Some are responsible for giving the alarm and notifying the fire department; others are to act as leaders to prevent panic, and to lead persons out of the building; others cut off the electricity to fans and similar equipment; some man the hoses; some are assigned to notify yardmasters, or other supervisors of cars or other rolling equipment endangered by fire, so that such equipment can be moved to safety.

Everyone is taught simple rules of protection: Get out of the building quickly, at a walk if possible; keep your head low, crawl if necessary, because the freshest air is usually near the floor; when fighting a fire, keep "outside" it, that is, stay between the fire and some exit.

The best fire-preventive, of course, is to keep fire hazards from developing. A common hazard is carelessness in discarding lighted matches or tobacco. One insurance company recently conducted a study which showed that nearly 12% of fires it studied were caused by smoking.

It has been said the best fertilizer for any farm is the farmer's foot. We can paraphrase this to say the best preventive of fire is the foot of the fire inspector. Just as the farmer by personal inspection of every square inch of his holdings can see what needs to be done to improve production, so can careful, continual inspection of structures, fuel tanks, storage piles, motors, rolling stock, fuze boxes and other equipment pay real dividends in cutting fire losses by providing the detection that makes possible the elimination of fire hazards.

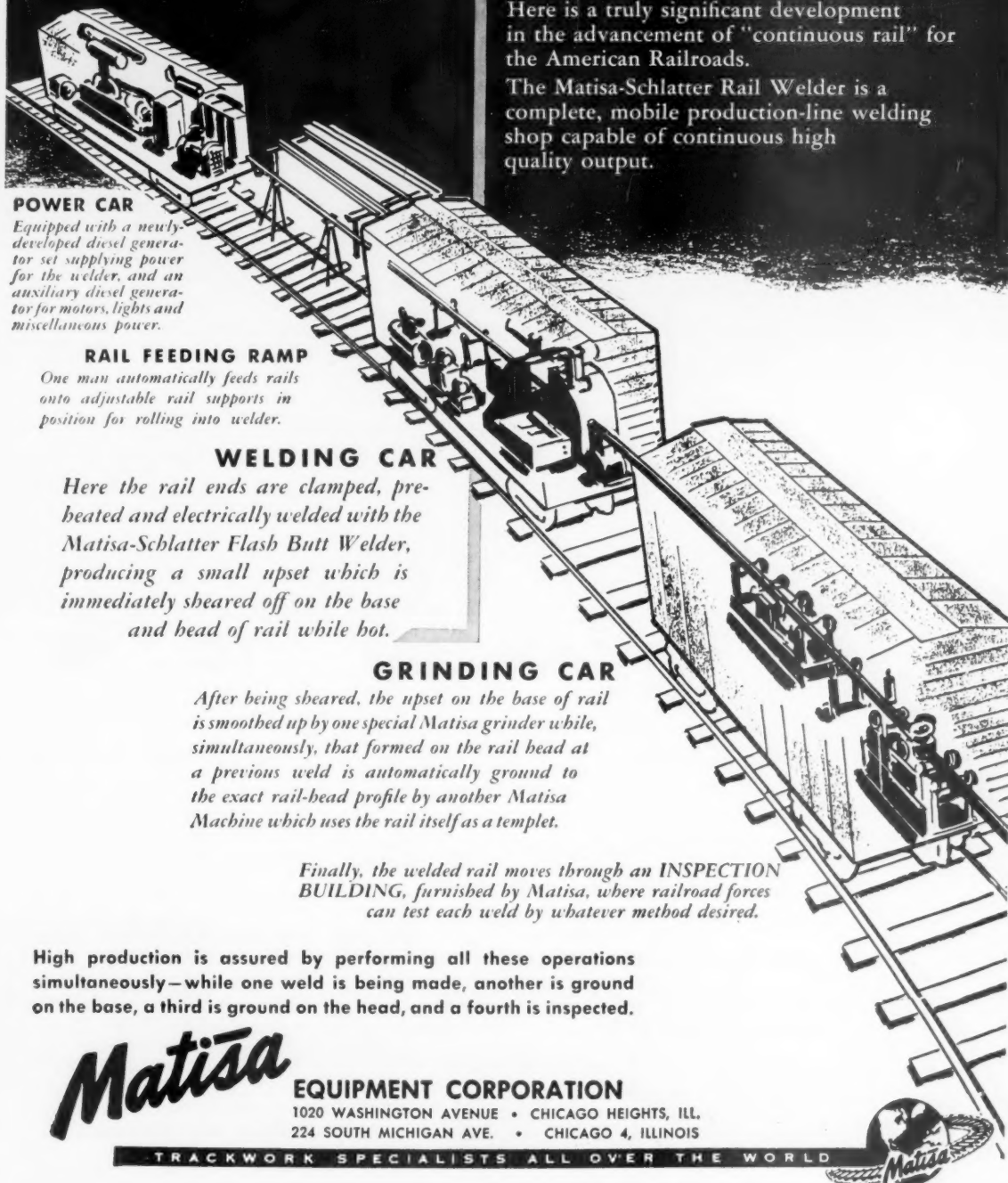
THE NEW

Matisa-Schlatter

FLASH BUTT RAIL WELDER

Here is a truly significant development in the advancement of "continuous rail" for the American Railroads.

The Matisa-Schlatter Rail Welder is a complete, mobile production-line welding shop capable of continuous high quality output.



POWER CAR

Equipped with a newly-developed diesel generator set supplying power for the welder, and an auxiliary diesel generator for motors, lights and miscellaneous power.

RAIL FEEDING RAMP

One man automatically feeds rails onto adjustable rail supports in position for rolling into welder.

WELDING CAR

Here the rail ends are clamped, pre-heated and electrically welded with the Matisa-Schlatter Flash Butt Welder, producing a small upset which is immediately sheared off on the base and head of rail while hot.

GRINDING CAR

After being sheared, the upset on the base of rail is smoothed up by one special Matisa grinder while, simultaneously, that formed on the rail head at a previous weld is automatically ground to the exact rail-head profile by another Matisa Machine which uses the rail itself as a templet.

Finally, the welded rail moves through an INSPECTION BUILDING, furnished by Matisa, where railroad forces can test each weld by whatever method desired.

High production is assured by performing all these operations simultaneously—while one weld is being made, another is ground on the base, a third is ground on the head, and a fourth is inspected.

Matisa

EQUIPMENT CORPORATION

1020 WASHINGTON AVENUE • CHICAGO HEIGHTS, ILL.
224 SOUTH MICHIGAN AVE. • CHICAGO 4, ILLINOIS

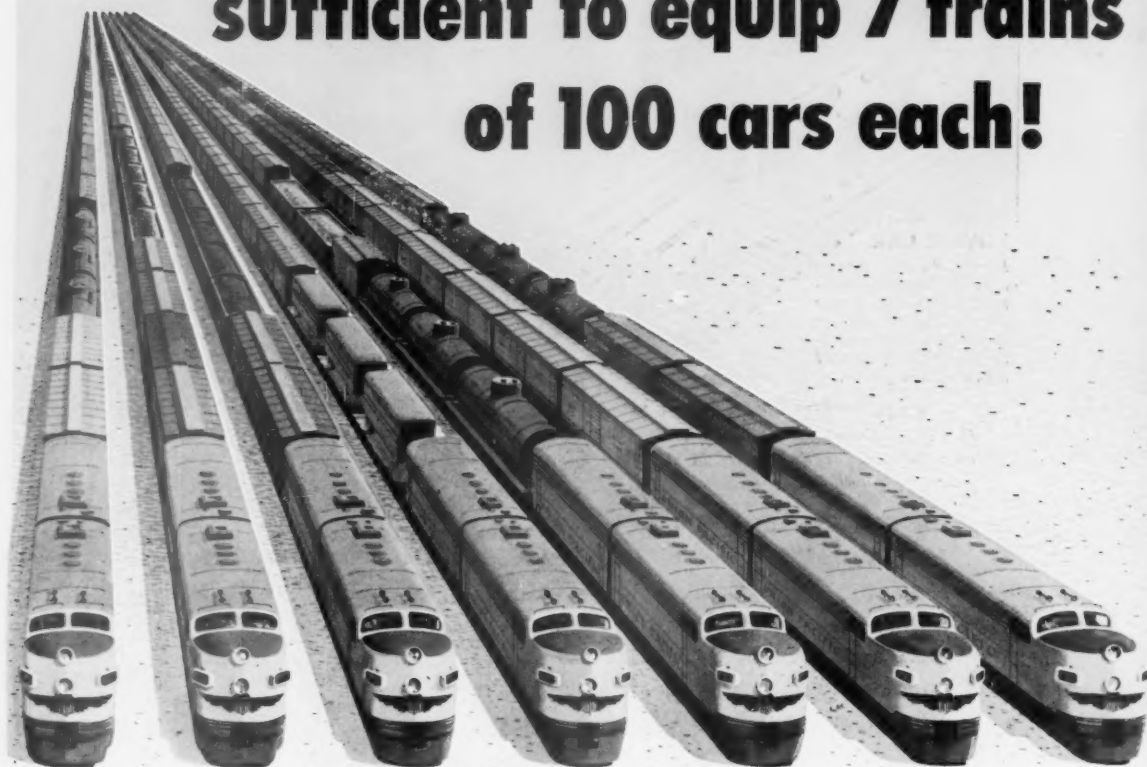
TRACKWORK SPECIALISTS ALL OVER THE WORLD



More and more NMB Sealed
Journal Box Lubricating Systems †
for America's Leading Railroads!



U.P. orders Lubricating Systems sufficient to equip 7 trains of 100 cars each!



Acceptance of the service-proved NMB System is snowballing! Prove to yourself, on your line, that the NMB System gives these vital benefits!

- PRACTICALLY ELIMINATES BRASS END WEAR
- ELIMINATES 81.4%* OF ALL HOT BOXES
- REDUCES OIL CONSUMPTION 90%
- REDUCES INSPECTION TIME 90%
- ELIMINATES VIRTUALLY ALL ACCIDENTS CAUSED BY HOT BOXES

SEE WORKING MODELS OF NMB SYSTEM AT
ALLIED RAILWAY SUPPLY ASSOCIATION EXHIBITION
SEPT. 11, 12, 13, 14, SHERMAN HOTEL, CHICAGO

MAKE THIS SIMPLE TEST

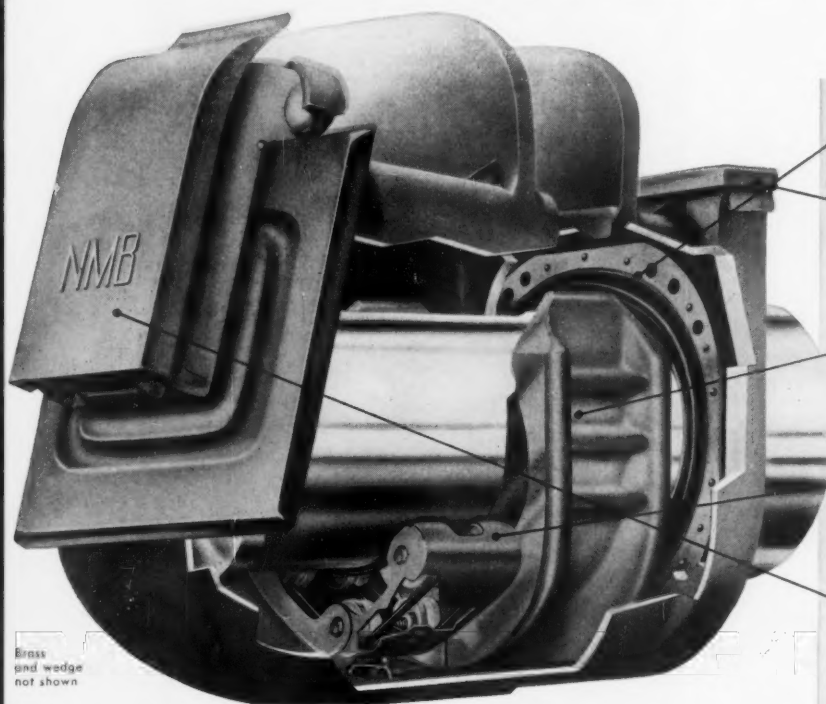
Equip 10 solid bearing cars with the NMB System. Net costs vary, according to journal size, from \$232. to \$267. per car. Operate under all possible conditions. Bearing end wear will be cut to an unbelievable 0.0006" per 1,000 car miles. Inspection will be needed only once a month. Oil consumption will drop to about 1 oz. per 1,000 journal box miles. Hot boxes will be virtually eliminated!

These predictions are based on actual experience in over 9,000,000 journal box miles of operation by major Class I railroads. This same experience shows cost of the NMB System can be completely amortized in 18 months, and thereafter savings of \$6.88 per 1,000 car miles are attainable.



NMB Lubricating System uses "long" solid bearings; is quickly installed without journal box alteration

A.A.R. APPROVED FOR INTERCHANGE SERVICE ON 10,000 CARS



Balls and wedge not shown

5 PRINCIPAL PARTS

A. OIL SEAL. Keeps oil in; dirt, water, brine and snow out.

B. DUST GUARD WELL COVER and FILTER. Exclude dripping water, snow, brine; yet permit breathing.

C. JOURNAL GUARD BEARINGS. Eliminate axle damage during humping, coupling, starting or heavy braking.

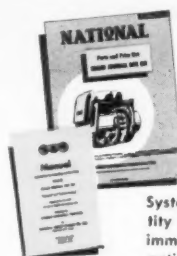
D. OIL CIRCULATOR. Lubricates bearings with $\frac{1}{2}$ turn of axle. Guarantees continuous lubrication. Bearings run 50° cooler.

E. JOURNAL BOX LID and WAFFLE GASKET. Provide tight oil and water seal at front opening. Eliminate vibration wear.

The NMB Sealed Journal Box Lubricating System† is the result of applying modern automotive engineering principles to a century-old railroad problem. Developed by NMB in collaboration with 3 major western railroads, the NMB System provides modern, sealed oil bath lubrication and exclusion of foreign matter from solid bearing journal boxes.

Installation is made in the standard A.A.R. journal box. No alteration is required. Waste packing formerly used for lubrication is eliminated (no waste grabs). NMB Systems for 5" x 9", 5½" x 10" and 6" x 11" A.A.R. standard solid bearing journal boxes can be shipped promptly.

†Based on operating experience of major Class I railroads
"Patented" and "Patents Pending"



NEW MANUAL describes simple, inexpensive installation steps. **PARTS & PRICE LIST** shows all

System parts, gives quantity purchase prices. Sent immediately without obligation.

NATIONAL
OIL & GREASE SEALS
O-RINGS SHIMS

1470

For complete information or consultation at your headquarters, write or telephone nearest NMB Railway Equipment Division Offices.

New York 17, N. Y.: Room 537, 527 Lexington Ave. Plaza 3-6647

Chicago 4, Illinois: Room 462 McCormick Bldg., 332 S. Michigan Ave., HARRISON 7-5163

Redwood City, California: Broadway at National Ave. EMERSON 6-3861

CANADIAN DISTRIBUTOR

The Robert Mitchell Co., Ltd., 64 Decarie Blvd., St. Laurent, Montreal 9, Quebec

NATIONAL MOTOR BEARING CO., INC.

GENERAL OFFICES: Redwood City, California

PLANTS: Redwood City, Downey and Long Beach, California; Van Wert, Ohio

NMB has manufactured tens of thousands of oil seals for roller bearing cars and over 1,000,000,000 oil seals for AUTOMOBILES • TRUCKS • TRACTORS • AIRCRAFT • MACHINES • HOUSEHOLD APPLIANCES



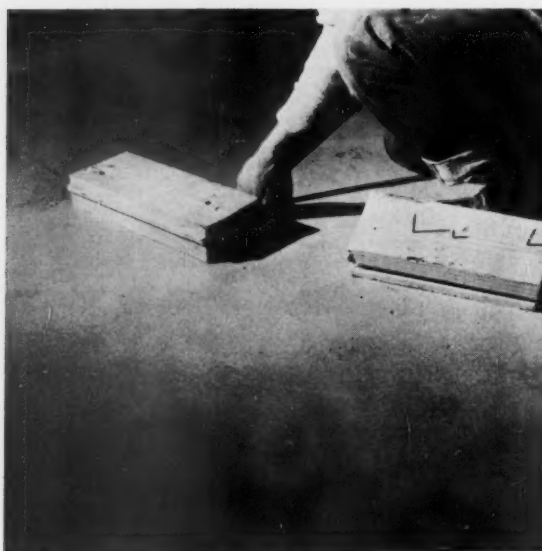
1 Starting to apply the Plastinail grain strip.



2 How the grain strip looks after trowelling.



5 Blocking nailed to the composition car floor.



6 Close-up of smooth floor after removing blocking.

Here's a Composition Car Floor

The illustrations show step by step how a plastic composition material is applied to worn-out box car floors to give them a new lease of life. Shippers are assured a smooth, tough, nailable floor covering and railroads benefit through reduction in both damage claims and maintenance expense. The car illustrated here is one of 132 cars with badly worn floors reconditioned at the Portland Ore., shops of the Union Pacific, which has been watching results with this type of box car floor since the

first car was equipped in 1948. It is reported that test cars after six years of service have shown practically no wear on the new-type floors.

The flooring material illustrated is an oxychloride cement composition called Plastinail and supplied by the F. E. Schundler Company, Joliet, Ill. A Douglas fir bark product, made at the Longview, Wash., plant of the Weyerhaeuser Timber Company, is one of the prime ingredients of this composition, and is said to make it as



3 Use of leveling bar and trowels on car floor.



4 Plastinail application almost to the doorway.

nailable as wood. Cleats and blocking may thus be nailed to the new floor to prevent loads from shifting and later removed without damaging the floor surface. Another characteristic of the composition floor attributed to the fir bark is resiliency which tends to prevent it from cracking under impact of heavy loads.

Before application of the composition flooring, any broken or otherwise defective boards in the floor are replaced and a layer of 15-lb. felt building paper is applied over rough, worn or badly splintered floors. A layer of 16-gage, 2-in. by 2-in. mesh, galvanized Keystone fencing wire is then applied over the paper and secured to the floor with 7/16-in. galvanized roofing nails.

With two or more bottom lining boards removed on each side of the car, a wedge-shaped layer of Plastinail is laid with a trowel between the side posts in such a way that it will serve as a grain strip. Grain, for instance, which gets through the inside lining falls on this angular surface and is deflected out onto the car floor where it can be easily swept out.

The next operation, starting at each end of the car, is to apply Plastinail about 3/4-in. thick above the wire mesh, spreading it uniformly over the car floor. Two men operate the leveling bar and subsequently smooth it with hand trowels. This application adds about 2,000 lb. to the car weight.

Financial

(Continued from page 16)

must be submitted for acceptance by company shareholders—each class voting separately. Such a plan must receive approval of owners of at least 75% of the outstanding shares of each class of affected stock. In view of the extensive ownership represented by the new directors, it became apparent, a Katy spokesman explained, that further processing of the revised plan would be futile.

The four new directors represent a group that includes two investment trusts, Pennroad Corporation of New York and the State Street Investment Corporation of Boston, and Bear, Stearns & Co., New York investment brokers. The shares they acquired represent about 62% of the outstanding Katy common and 34% of the aggregate common and preferred shares of the company.

Robert E. Thomas, vice-president of Pennroad, said the group made their investment on a long-term basis. "We have great confidence in the future of the Katy and the territory it serves," he stated.

Other new directors are: John N. Worcester, senior partner in Sullivan & Worcester, Boston; and president and director of the Atlantic Coal Company; George F. Bennett, partner in State Street Research & Management Co., and vice-president of the State Street Investment Corporation; and Salim L. Lewis, partner in Bear, Stearns & Co., New York.

Chicago, St. Paul, Minneapolis & Omaha.—Trackage Rights.—This road has applied to the ICC for authority to acquire trackage rights over a 14½-mi Burlington line between Laurel, Neb., and Randolph. Operation under the trackage rights, in effect for sometime under ICC Service Order 897, would be in lieu of operations over the Omaha's 20-mi line between Wayne,

Neb., and Randolph, which was put out of service by floods. The trackage contract would call for payment by the Omaha of \$2 per train-mile, minimum \$4,000 per calendar year; and the net annual saving to that road would be about \$12,500.

Security Price Averages

	July 19	Prev. Week	Last Year
Average price of 20 representative railway stocks	95.09	96.40	69.02
Average price of 20 representative railway bonds	99.04	99.14	95.32

Dividends Declared

CHICAGO, ROCK ISLAND & PACIFIC.—\$1.25, quarterly, payable September 30 to holders of record September 13.

GREAT NORTHERN.—common, 62½¢, payable September 19 to holders of record August 25.

NORTHERN (NEW HAMPSHIRE).—\$1.50, quarterly, payable July 30 to holders of record July 14.

SEABOARD AIR LINE.—\$1.25, quarterly, payable September 27 to holders of record September 16.

Railway Officers

BALTIMORE & OHIO.—**G. Vernon Frederick**, assistant advertising manager, has been named advertising manager at Baltimore, succeeding the late **Julian J. Nugent** (*Railway Age* June 6, page 46).

BANGOR & AROOSTOOK.—**Earle H. Kelley**, assistant to comptroller and freight claim agent, has been appointed assistant comptroller at Bangor, Me. **J. Gregg Beckett**, chief claims adjuster, has been named freight claim agent.

BESSEMER & LAKE ERIE.—**P. A. Minnis**, assistant to general storekeeper, has been appointed general storekeeper at Greenville, Pa. The position of assistant to general storekeeper has been discontinued.

BOSTON & ALBANY.—**E. M. Skelton**, assistant division engineer, has been appointed division engineer, with headquarters as before at Boston, succeeding **C. M. Gregg**, who has been named assistant division engineer, Eastern division, of the New York Central, at Poughkeepsie, N. Y. **J. J. Connors**, supervisor bridges and buildings at Boston, succeeds Mr. Skelton as assistant division engineer there.

CHICAGO & NORTH WESTERN.—**H. D. Barnes**, comptroller at Chicago, retired July 1 after 38 years of service.

COTTON BELT.—**C. C. Mitchell**, assistant general claim agent at Pine Bluff, Ark., has been appointed general claim agent at Tyler, Tex., succeeding **Y. D. Ward**, retired. **George F. Battenfield** has been named auditor of miscellaneous accounts at Tyler, replacing **George Fuchs**, retired.

J. C. Barham, tie and timber agent at Texarkana, Ark.-Tex., has been named forest products and commissary agent, assuming the duties of **A. M. Campbell**, superintendent of dining car department, who has retired.

DENVER & RIO GRANDE WESTERN.—**Joseph T. Johnston**, auditor, passenger accounting, has retired after more than 48 years of service. **Alex Coquillard, Jr.**, auditor, car service accounting, assumes the duties of Mr. Johnston, with the title of auditor, passenger and car service accounting.

MISSOURI PACIFIC.—**Harry C. Macomber**, electronics engineer at St. Louis, has been appointed superintendent of communications there, succeeding **L. E. Verbarq**, resigned. **Harold R. Duckworth**, assistant electronics engineer at Kansas City, Mo., replaces Mr. Macomber.

L. A. Gregory, assistant chief operating officer and general superin-

tendent transportation at St. Louis, will retain the position of assistant chief operating officer, while **Marvin L. Smith**, assistant general manager, Southern district, at Little Rock, Ark., becomes general superintendent transportation. **L. M. Elledge**, superintendent at Wichita, Kan., succeeds Mr. Smith, and in turn has been succeeded by **H. B. Davis**, assistant superintendent at Nevada, Mo. Mr. Davis' successor is **John G. Sheppard**, who has been transferred from Pueblo, Colo., and has in turn been replaced by **Ralph D. Morris**, trainmaster at Kingsville, Tex.

PENNSYLVANIA.—**I. T. Marine**, freight traffic manager at Philadelphia, has been appointed general traffic manager there, succeeding **William McL. Pomeroy**, who has retired after more than 46 years of railroad service. **C. Robert Burr**, general freight agent at Chicago, succeeds Mr. Marine as freight traffic manager at Philadelphia. **William M. Hardt, II**, assistant general freight agent at Pittsburgh, has been named general freight agent at Chicago and has been succeeded at Pittsburgh by **W. D. Gordon**, division freight agent—special duty office of vice-president of traffic at Philadelphia.

Mr. Marine was born at Philadelphia June 15, 1898, and joined the Pennsylvania in 1914 in its operating department. He later served as a freight representative and as assistant foreign



I. T. Marine

freight agent at New York; division freight agent at Cincinnati and Youngstown; general western freight agent at Chicago; general freight agent at Chicago, and western freight traffic manager. Mr. Marine became freight traffic manager at Philadelphia in November 1945. Several years ago he completed a course in advanced management at Harvard Graduate School of Business Administration.

Mr. Burr was born in Akron, Ohio, in 1911, was graduated from Allegheny College in 1931 and entered railroad service in the freight traffic department of the PRR at Pittsburgh. Advancing through clerical positions in several cities, he served as traveling freight

agent at Buffalo; assistant chief rate clerk at Pittsburgh; district freight agent at various points; division freight agent at Louisville, and assistant general freight agent at Chicago. In 1953



C. Robert Burr

he was assigned to help organize the road's TrucTrain piggyback service and in August 1954 was named general freight agent at Chicago.

WESTERN MARYLAND.—As reported in *Railway Age* July 4 **George M. Leilich** has been appointed vice-president, operations, at Baltimore. Mr. Leilich was born at Milwaukee, December 18, 1916, and was graduated from Baltimore Polytechnic Institute and Purdue University (B.S. in M.E., 1936). He also studied for one year at Yale University as a Strathcona Fellow in Transportation. Entering railroad service in July 1937 as special apprentice in the motive power depart-



George M. Leilich

ment of the Lehigh Valley at Sayre, Pa., he later served that road as transportation inspector at Bethlehem, Pa.; assistant trainman at Jersey City, N.J.; trainmaster at Easton, Pa., Wilkes-Barre, and Jersey City; and superintendent of the Wyoming and Buffalo divisions. Mr. Leilich joined the WM in February 1953 as general superintendent, the position he held until his recent appointment as vice-president, operations.

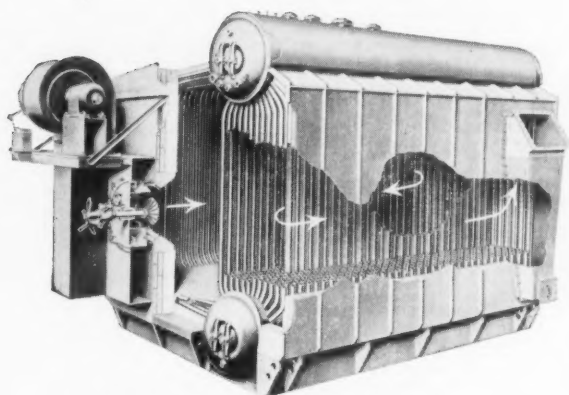
FOR STEAM CAPACITY up to 60,000 POUNDS

Choose your boiler from these two

If you burn oil or gas, investigate the VP Package Boiler for capacities up to 40,000 pounds per hr ... the VU-10 up to 60,000 pounds.

For stoker firing, the VU-10 is available from 10,000 to 60,000 pounds of steam per hour.

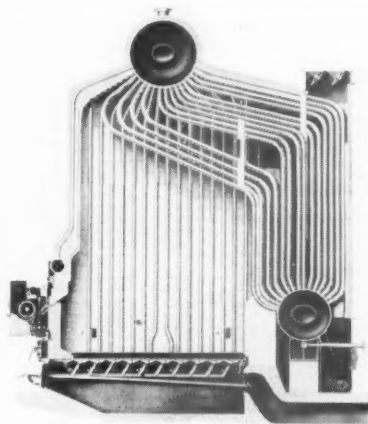
Whatever your fuel ... whatever your steam capacity requirements up to 60,000 pounds per hour ... you'll find that one of the Combustion Engineering Boilers described below will be just right for you.



The VP Boiler — the Package Boiler with EXTRA Features

The VP boiler

The C-E Package Boiler, type VP ... completely shop-assembled ... for oil or gas firing. It is available in capacities from 4,000 to 40,000 lb steam per hr; for pressures to 500 psi. The VP Boiler has more water-cooled area per cubic foot of furnace volume than any other boiler of its size and type. The large (30-in. diameter) lower drum permits a simple, symmetrical tube arrangement ... greater water storage capacity ... easy access for washing down or inspection. The centrifugal fan is efficient, yet its noise level is less than half that of typical high-speed blowers used on most package boilers. Baffle arrangement is simple, resulting in low draft loss ... simple soot blowing ... elimination of dead pockets ... high heat absorption.



The VU-10 Boiler, as arranged for C-E Spreader Stoker firing

The VU-10 boiler

The VU-10 Boiler is designed for industrial load conditions, particularly for plants with small operating and maintenance forces. Capacities range from 10,000 to 60,000 lb steam per hr ... pressures to 475 psi ... heat recovery equipment is available if desired. Fuel can be either coal (C-E Spreader, Traveling Grate or Underfeed Stoker) oil or gas. This boiler is a completely standardized design adaptable to many conditions. It responds readily to variations in load; it is simple to operate and maintain. All parts are easily accessible for inspection. Like the VP, the VU-10 Boiler is a complete unit — boiler, furnace setting, fuel-burning equipment, controls, forced draft — bringing you the benefit of one contract ... one responsibility.

Fully descriptive catalogs are available on both of these boilers. We'll be happy to send yours upon request.



COMBUSTION ENGINEERING

Combustion Engineering Building • 200 Madison Avenue, New York 16, N. Y. B-763B

BOILERS, FUEL BURNING & RELATED EQUIPMENT; PULVERIZERS, AIR SEPARATORS & FLASH DRYING SYSTEMS; PRESSURE VESSELS; AUTOMATIC WATER HEATERS; SOIL PIPE

Freight Operating Statistics of Large Steam Railways—Selected Items

Region, Road end Year	Miles of road operated	Locomotive-Miles		Car-Miles		Ton-miles (thousands)		Road-locom. on line					
		Train-miles	Principal and helper	Light	Loaded (thou-sands)	Per cent loaded	Gross excl. locos and tenders	Net rev. and non-rev.	Serviceable		per cent B.O.		
									Unstored	Stored			
New England Region	Boston & Maine.....1955	1,564	243,859	251,196	10,887	10,078	64.2	655,331	248,318	70	1	5	6.6
	1954	1,665	254,348	260,248	10,447	9,782	63.5	646,105	245,205	73	1	7	8.6
	N. Y., N. H. & Hfd.....1955	1,746	276,595	276,483	17,330	12,154	66.9	747,037	293,236	91	..	7	7.1
	1954	1,747	283,282	283,286	13,822	11,510	65.3	722,146	281,397	89	..	8	8.2
	Delaware & Hudson.....1955	792	180,004	186,140	10,375	9,252	66.0	634,271	309,835	35	6	2	4.7
Great Lakes Region	1954	793	179,945	185,198	10,157	8,487	66.0	579,870	282,384	39	5	1	2.2
	Del., Lack. & Western.....1955	962	274,774	287,310	20,435	12,268	68.6	780,726	332,182	61	..	2	3.2
	1954	962	259,118	272,289	19,689	10,768	66.1	696,031	289,694	60	..	1	1.5
	Erie.....1955	2,224	545,302	553,100	13,639	30,841	69.2	1,865,086	741,150	162	..	2	1.2
	1954	2,224	506,939	509,867	17,898	28,281	67.7	1,741,986	685,798	161	..	3	1.8
Central Eastern Region	Grand Trunk Western.....1955	952	276,562	282,675	2,090	9,118	59.8	646,708	250,335	58	..	24	29.3
	1954	952	240,738	245,912	1,987	8,234	59.2	580,830	225,847	61	2	14	18.2
	Lehigh Valley.....1955	1,142	201,075	204,146	5,641	10,352	66.7	685,229	306,734	33	..	1	2.9
	1954	1,150	193,400	196,481	5,841	9,422	65.3	624,431	272,666	30	3	1	2.9
	New York Central.....1955	10,661	2,506,717	2,552,139	98,352	101,958	62.0	7,134,695	3,123,229	566	63	125	137
Central Eastern Region	1954	10,663	2,551,984	2,588,071	84,846	92,277	60.7	6,505,255	2,801,932	614	125	137	15.6
	New York, Chic. & St. L.....1955	2,155	709,169	733,661	7,103	28,574	66.0	1,965,704	877,399	165	19	32	14.8
	1954	2,161	644,949	663,893	6,205	25,936	63.0	1,793,004	756,639	168	47	33	13.3
	Pitts. & Lake Erie.....1955	221	59,602	59,806	..	2,812	69.6	241,169	152,421	14	7	..	..
	1954	221	51,596	51,755	..	2,421	63.7	209,636	126,124	15	7	1	4.3
Central Eastern Region	Wabash.....1955	2,381	539,627	540,302	7,217	21,668	66.9	1,564,752	600,568	104	..	..	..
	1954	2,381	494,953	495,928	6,574	21,186	64.8	1,365,582	513,830	106	..	..	..
	Baltimore & Ohio.....1955	6,072	1,544,146	1,710,423	151,613	63,574	61.8	4,933,191	2,380,527	442	10	90	16.6
	1954	6,077	1,376,456	1,509,041	125,016	55,948	60.0	4,218,512	1,936,793	436	95	104	16.4
	Bessemer & Lake Erie.....1955	208	39,896	42,300	..	1,968	61.6	233,440	152,633	16	..	..	..
Central Eastern Region	1954	209	32,597	33,811	..	1,486	66.0	160,819	103,776	14	2	..	..
	Central RR Co. of New Jersey.....1955	613	119,307	120,097	5,168	4,651	65.7	341,160	175,413	58	..	11	15.9
	1954	613	122,373	123,703	6,344	4,478	63.9	334,375	170,039	60	2	8	11.4
	Chicago & Eastern Ill.....1955	868	108,179	108,179	2,474	5,297	65.5	353,657	170,875	27	..	1	3.6
	1954	868	116,152	116,152	2,969	4,643	65.4	324,745	158,844	25	..	3	10.7
Central Eastern Region	Elgin, Joliet & Eastern.....1955	236	83,397	83,700	..	2,714	62.5	219,956	117,391	35	3	3	7.3
	1954	236	78,206	78,565	..	2,483	64.2	194,257	103,785	31	6	4	9.8
	Pennsylvania System.....1955	9,892	2,809,889	2,989,006	201,662	122,451	64.7	8,629,134	3,974,014	762	108	458	34.5
	1954	9,906	2,517,218	2,684,682	178,538	107,687	61.5	7,708,932	3,408,485	744	373	363	24.5
	Reading.....1955	1,304	315,935	318,142	12,147	12,328	61.1	999,971	512,033	156	7	27	14.2
Central Eastern Region	1954	1,305	289,736	293,813	13,640	11,189	60.4	874,817	432,479	163	42	19	8.5
	Western Maryland.....1955	847	161,372	167,881	10,007	6,256	60.9	524,319	288,263	36	..	1	2.7
	1954	857	144,008	154,939	9,510	5,615	64.4	457,091	255,785	35	26	1	1.3
	Chesapeake & Ohio.....1955	5,046	1,462,638	1,483,344	41,753	63,683	57.9	5,436,335	2,999,817	378	25	181	31.0
	1954	5,021	1,444,981	1,464,868	27,851	47,961	57.9	3,956,119	2,155,235	322	102	166	28.1
Central Eastern Region	Norfolk & Western.....1955	2,110	676,286	722,274	58,548	34,093	59.2	3,124,253	1,702,265	217	25	28	10.4
	1954	2,113	554,373	579,356	36,623	24,873	59.9	2,164,060	1,150,301	205	48	23	8.3
	Atlantic Coast Line.....1955	5,334	892,084	892,084	10,577	29,464	57.0	2,180,437	957,657	237	..	7	2.9
	1954	5,354	840,937	840,940	9,985	26,030	57.0	1,900,227	817,472	241	..	6	2.4
	Central of Georgia.....1955	1,731	194,767	194,793	2,001	8,584	72.2	565,763	277,055	73	..	4	5.2
Southern Region	1954	1,731	188,753	188,776	2,371	7,121	67.1	488,601	231,124	69	..	1	1.4
	Gulf, Mobile & Ohio.....1955	2,717	292,377	292,377	288	17,975	71.9	1,186,184	572,898	88	..	1	1.1
	1954	2,718	285,747	285,747	222	14,756	66.0	1,006,398	458,271	87	..	2	2.2
	Illinois Central.....1955	6,539	1,292,536	1,294,575	40,109	54,172	63.0	3,886,031	1,774,938	452	61	211	29.1
	1954	6,537	1,271,825	1,276,308	42,456	46,634	62.9	3,328,669	1,490,053	487	63	97	15.0
Southern Region	Louisville & Nashville*.....1955	4,715	189,216	189,277	2,946	5,980	61.3	481,227	264,208	164	75	7	7.8
	1954	4,722	825,228	840,625	16,274	29,740	62.8	2,216,836	1,029,988	219	85	26	7.9
	Nash., Chatt. & St. Louis*.....1955	1,043	37,702	37,702	166	1,450	70.3	93,946	44,566	47	..	6	11.3
	1954	1,032	183,907	189,138	4,629	6,261	64.9	429,501	195,574	50	..	3	5.7
	Seaboard Air Line.....1955	4,053	649,018	649,018	2,559	26,757	61.6	1,989,112	870,628	135	..	9	6.3
Southern Region	1954	4,067	663,005	663,005	2,307	25,937	60.4	1,901,444	816,362	145	..	6	4.0
	Southern.....1955	6,264	988,474	988,534	15,935	49,731	68.9	3,234,406	1,514,378	279	..	1	..
	1954	6,262	911,811	911,856	12,596	38,137	65.2	2,504,097	1,103,235	271	..	2	..
	Chicago & North Western.....1955	7,848	703,086	705,068	9,203	29,965	66.7	2,018,288	928,915	142	22	35	17.6
	1954	7,850	686,155	689,081	11,357	27,170	64.5	1,848,845	842,270	179	33	75	26.1
Northwestern Region	Chicago Great Western.....1955	1,437	134,045	134,045	210	7,797	69.7	511,221	331,924	30	..	3	9.1
	1954	1,437	130,545	130,545	222	7,308	68.0	489,460	220,349	29	..	4	12.1
	Chic., Milw., St. P. & Pac.....1955	10,633	957,397	974,457	18,230	41,429	65.3	2,794,418	1,230,401	256	52	25	7.5
	1954	10,631	942,630	956,111	22,545	39,604	65.4	2,667,405	1,181,329	293	105	39	8.9
	Chic., St. P., Minn. & Omaha.....1955	1,606	165,106	166,046	4,771	5,004	65.9	338,992	144,706	60	..	12	16.7
Northwestern Region	1954	1,606	157,819	159,130	4,418	4,667	65.7	321,115	137,662	63	6	23	25.0
	Duluth, Missabe & Iron Range.....1955	569	88,087	88,489	1,067	3,555	51.3	380,785	232,244	57	5	6	8.8
	1954	566	64,202	64,539	663	2,492	53.4	261,367	156,699	43	3	9	16.4
	Great Northern.....1955	8,270	1,117,281	1,123,295	31,363	41,909	61.8	3,003,776	1,394,909	231	144	47	11.1
	1954	8,293	948,343	954,532	24,665	38,054	68.1	2,648,465	1,246,659	205	246	37	7.6
Northwestern Region	Minneapolis, St. P. & S. Ste. M.....1955	4,171	372,344	374,124	2,162	12,334	69.8	879,669	365,196	85	11	6	5.9
	1954	4,169	368,481	370,798	3,137	11,986	70.6	743,992	345,827	95	5	13	11.5
	Northern Pacific.....1955	6,570	842,254	877,075	27,278	32,404	66.0	2,338,253	1,034,369	288	25	60	16.1
	1954	6,570	766,869	788,247	26,608	31,331	69.6	2,099,778	959,523	285	62	62	15.2
	Atch., Top. & S. Fe (incl. G. C. & S. F. and P. & S. F.).....1955	13,098	2,442,112	2,542,479	59,955	115,674	63.7	7,805,301	2,917,718	519	81	29	4.6
Central Western Region	1954	13,067	2,777,350	2,844,314	60,013	98,316	59.6	6,948,579	2,486,146	518	155	30	4.3
	Chic., Burl. & Quincy.....1955	8,807	1,063,686	1,059,052	37,609	45,918	70.1	2,894,834	1,280,165	209	58	25	8.6
	1954	8,824	1,053,976	1,047,324	32,767	43,528	67.6	2,841,240	1,255,594	229	76	30	9.0
	Chic., Rock I. & Pac.....1955	2,904	871,200	867,794	1,483	35,913	61.8	2,464,154	1,025,647	170	4	1	6
	1954	2,861	893,012	888,178	2,117	34,207	59.5	2,470,471	984,501	171	2	10	5.5
Central Western Region	Denver & R. G. Wn.....1955	2,165	291,193	311,865	30,446	14,250	67.3	1,004,739	471,135	60	42	2	

For the Month of April 1955 Compared with April 1954

Region, Road and Year	New Eng. Region	Freight cars on line			Per Cent B.O.	G.t.m. per train-hr.		Net ton-mi. per train-mi.	Net ton-mi. per car-mi.	Net ton-mi. per car-day	Car-miles per car-day	Net ton-mi. per road-mi.	Train-miles per train-hour	Miles per loco. per day
		Home	Foreign	Total		excl. locos and tenders	G.t.m. per train-mi.							
Boston & Maine.....	1955	2,591	8,132	10,723	5.0	42,326	2,695	1,021	24.6	789	49.9	5,292	15.8	129.8
	1954	2,139	7,363	10,502	4.6	42,226	2,546	966	25.1	791	49.7	4,909	16.6	124.6
N. Y., N. H. & Hfd.....	1955	2,242	14,759	17,001	2.1	45,573	2,701	1,060	24.1	572	35.4	5,598	16.8	126.8
	1954	3,105	12,461	15,566	2.4	42,587	2,549	993	24.4	592	37.1	5,369	16.7	130.3
Delaware & Hudson.....	1955	4,862	4,596	9,458	5.2	66,081	3,541	1,730	33.5	1,031	46.6	13,040	18.8	163.3
	1954	7,600	4,042	11,642	4.7	61,427	3,241	1,578	33.3	805	36.7	11,870	19.1	155.0
Del., Lack. & Western.....	1955	6,048	15,184	21,232	3.2	58,981	3,232	1,138	27.1	714	38.4	11,550	18.1	177.2
	1954	9,101	8,178	17,279	3.8	47,179	2,730	1,134	26.9	918	32.6	10,638	16.6	163.2
Erie.....	1955	8,633	17,834	26,467	4.5	66,112	3,449	1,371	24.0	971	58.6	11,108	19.3	128.4
	1954	13,034	14,380	27,414	5.1	64,782	3,467	1,365	24.2	854	52.0	10,279	18.9	117.4
Grand Trunk Western.....	1955	4,083	8,651	12,734	8.7	51,543	2,354	911	27.5	653	39.8	8,765	22.0	128.1
	1954	4,289	7,991	12,280	4.2	51,365	2,425	943	27.4	631	38.9	7,908	21.3	115.0
Lehigh Valley.....	1955	9,070	7,945	17,015	3.9	69,900	3,427	1,534	29.6	603	30.5	8,953	20.5	219.9
	1954	9,777	6,308	16,085	4.0	68,819	3,438	1,488	29.0	593	30.3	8,293	20.3	199.9
New York Central.....	1955	65,712	83,786	149,498	6.3	51,269	2,879	1,260	30.6	967	36.7	9,765	18.0	139.9
	1954	87,665	73,232	160,897	9.6	51,193	2,928	1,261	30.4	583	31.6	8,759	17.7	100.8
New York, Chic. & St. L.....	1955	8,492	17,032	25,524	7.9	50,092	2,834	1,265	30.7	1,160	57.3	13,572	18.1	128.3
	1954	10,496	12,699	23,195	7.1	52,734	2,810	1,186	29.2	1,104	60.1	11,671	19.0	98.4
Pitts. & Lake Erie.....	1955	5,073	6,577	11,650	6.2	60,702	4,058	2,565	54.2	403	10.7	22,990	15.0	100.8
	1954	9,834	5,756	15,590	7.1	59,982	4,063	2,444	52.1	276	8.3	19,023	14.8	68.1
Wabash.....	1955	8,327	10,258	18,585	7.0	60,623	2,918	1,104	29.0	919	58.4	8,086	22.0	126.0
	1954	8,695	9,282	17,977	7.7	64,533	2,774	1,044	24.3	919	58.4	7,193	23.4	164.9
Baltimore & Ohio.....	1955	54,388	47,803	102,191	14.1	49,762	3,241	1,564	37.4	789	34.1	13,068	15.6	123.3
	1954	63,719	34,819	98,538	9.9	48,421	3,097	1,422	34.6	837	31.6	10,624	15.8	91.1
Bessemer & Lake Erie.....	1955	5,563	920	6,483	21.7	90,411	6,061	3,963	77.6	770	16.1	24,460	15.5	102.7
	1954	8,728	736	9,464	7.4	72,506	5,102	3,293	69.8	357	7.7	16,551	14.7	80.4
Central RR Co. of New Jersey.....	1955	4,798	9,102	13,900	8.2	42,103	2,971	1,528	37.7	412	16.6	9,238	14.7	80.1
	1954	5,639	8,404	14,043	11.3	39,609	2,853	1,451	38.0	412	17.0	9,516	14.5	83.7
Chicago & Eastern Ill.....	1955	2,873	3,890	6,763	4.9	50,378	2,278	1,584	32.3	824	39.0	6,562	15.4	113.0
	1954	2,933	6,446	9,379	7.9	52,336	2,372	1,372	32.7	838	37.3	6,562	15.4	113.0
Elgin, Joliet & Eastern.....	1955	7,495	8,898	16,393	6.1	23,447	2,737	1,461	34.3	241	8.9	16,581	8.9	91.5
	1954	7,174	6,484	13,658	6.2	22,948	2,602	1,390	41.8	249	9.3	14,659	9.2	83.9
Pennsylvania System.....	1955	114,791	90,114	204,905	14.3	51,942	3,150	1,451	32.5	648	30.9	13,391	17.9	87.6
	1954	109,481	95,353	204,834	10.1	55,922	3,139	1,388	31.7	557	28.6	11,469	18.3	70.4
Reading.....	1955	14,790	15,726	30,516	6.1	48,736	3,165	1,621	41.5	537	21.2	13,089	15.4	69.5
	1954	22,248	12,284	34,532	6.4	44,183	3,020	1,493	38.7	413	17.7	11,417	14.6	55.0
Western Maryland.....	1955	4,969	7,910	12,879	6.2	49,007	3,367	1,804	42.2	127	1.9	11,414	14.6	104.9
	1954	8,738	2,556	11,294	3.6	45,925	3,220	1,862	45.6	742	25.3	9,919	14.5	72.0
Chesapeake & Ohio.....	1955	51,365	30,760	82,125	4.3	70,104	3,737	2,062	47.1	1,167	43.9	19,816	18.9	93.7
	1954	60,673	22,232	82,905	3.4	67,576	3,472	1,892	44.9	873	33.6	14,308	19.6	71.8
Norfolk & Western.....	1955	31,959	7,879	39,838	1.8	80,776	4,753	2,590	49.9	1,415	47.9	26,892	17.5	104.3
	1954	42,578	5,739	48,317	2.5	69,421	3,978	2,114	46.2	733	28.3	18,146	17.8	81.3
Atlantic Coast Line.....	1955	19,293	18,061	37,354	3.4	44,588	2,454	1,078	32.5	850	45.9	5,985	18.2	136.6
	1954	22,155	14,462	36,617	2.0	40,471	2,282	982	31.4	746	41.7	5,089	17.9	127.8
Central of Georgia.....	1955	2,867	6,356	9,223	4.6	49,321	2,919	1,430	32.3	939	40.2	5,335	17.0	95.0
	1954	4,009	4,521	8,530	4.6	46,716	2,602	1,231	32.5	871	40.0	4,451	18.0	98.7
Gulf, Mobile & Ohio.....	1955	4,816	11,234	16,044	2.4	78,738	4,071	1,966	31.9	1,143	46.9	9,029	19.4	118.9
	1954	6,485	8,062	14,547	2.9	78,427	3,823	1,808	31.2	1,032	50.0	8,520	19.4	118.9
Illinois Central.....	1955	26,283	26,446	52,729	2.4	51,415	3,045	1,391	32.8	1,135	55.0	9,048	17.1	66.3
	1954	32,721	19,578	52,299	4.0	46,276	2,653	1,188	32.0	939	46.8	7,598	17.7	74.0
Louisville & Nashville*.....	1955	32,358	6,942	39,300	3.8	57,993	2,551	1,401	44.2	221	7.8	1,868	22.8	28.0
	1954	41,077	12,190	53,267	2.9	47,303	2,694	1,340	37.1	685	29.4	7,786	17.6	92.1
Nash., Chatt. & St. Louis*.....	1955	4,034	2,623	6,657	3.9	41,277	2,501	1,186	30.7	220	10.2	1,424	16.6	24.6
	1954	4,070	3,520	7,590	3.2	45,701	2,340	1,065	31.2	414	41.6	6,317	19.6	150.0
Seaboard Air Line.....	1955	12,225	14,498	26,723	2.8	51,085	3,362	1,513	31.7	1,077	57.7	8,216	19.6	175.9
	1954	15,030	13,364	28,394	2.6	52,933	2,915	1,252	31.5	954	50.2	6,691	18.5	173.8
Southern.....	1955	18,174	26,925	45,099	4.2	54,875	3,298	1,544	30.5	1,119	53.4	8,059	16.8	128.4
	1954	20,063	22,972	43,035	3.4	49,167	2,745	1,209	28.9	854	45.2	5,873	18.0	123.4
Chicago & North Western.....	1955	17,689	26,786	44,445	4.4	53,109	2,920	1,344	31.0	709	34.3	3,945	18.5	132.6
	1954	24,010	23,903	47,913	5.4	48,202	2,756	1,255	31.0	603	30.1	3,577	17.9	86.6
Chicago Great Western.....	1955	1,710	3,832	5,542	3.6	72,824	3,820	1,733	29.7	1,329	64.1	5,380	19.1	141.9
	1954	1,981	3,613	5,594	3.8	72,685	3,755	1,691	30.1	1,309	63.4	5,111	19.4	136.9
Chic., Milw., St. P. & Pac.....	1955	33,038	27,926	60,964	5.8	56,535	2,928	1,389	27.7	657	33.9	3,857	19.4	107.2
	1954	37,618	25,327	62,945	7.1	52,443	2,840	1,528	29.6	816	31.6	3,304	19.1	107.2
Chic., St. P., Minn. & Omaha.....	1955	1,138	7,209	8,347	5.1	31,324	2,071	884	28.9	581	30.5	3,003	15.3	86.6
	1954	1,125	6,621	7,746	5.1	32,511	2,047	878	29.5	583	30.1	2,857	16.0	65.9
Duluth, Missabe & Iron Range.....	1955	13,723	756	14,479	1.6	70,542	4,628	2,233	65.3	323	15.6	13,605	16.3	52.7
	1954	14,826	481	15,307	1.2	69,420	4,266	2,558	62.9	341	10.2	9,228	17.1	41.0
Great Northern.....	1955	22,421	20,100	42,521	3.0	52,923	2,718	1,262	33.2	1,102	50.5	5,622	17.7	96.5
	1954	26,739	15,715	42,454	3.1	51,736	2,814	1,325	33.8	960	43.0	5,011	18.5	101.3
Minneapolis, St. P. & S. Ste. M.....	1955	7,101	6,900	14,001	6.1	31,736	2,814	1,325	33.8	788	41.6	5,011	18.5	101.3
	1954	7,712	5,904	13,616	6.2	42,198	2,029	943	28.9	848	41.6	2,765	20.9	116.8
Northern Pacific.....	1955	19,436	16,666	36,102	4.9	56,066	2,787	1,233	31.9	931	44.2	5,248	20.2	87.6
	1954	22,598	12,183	34,781	5.6	53,230	2,755	1,259	30.6	909	42.7	4,868	19.4	71.2
Atch., Top. & S. Fe (incl. G. C. & S. F. and P. & S. F.).....	1955	52,763	32,704	85,467	4.6	74,111	3,209	1,200	25.2	1,121	69.8	7,425	23.2	146.8
	1954	59,905	30,531	90,436	3.0	73,022	3,062	1,096	25.3	922	61.2	6,242	23.9	121.1
Chic., Burl. & Quincy.....	1955	22,383	21,531	43,914	3.4	57,889	2,726	1,206	27.9	966	49.5	4,845	21.3	130.1
	1954	21,852	18,809	40,661	3.5	56,745	2,700	1,193	28.8	1,011	51.9	4,743	21.1	105.2
Chic., Rock I. & Pac.....	1955	13,990	19,038	33,028	4.3	57,568	2,835	1,180	28.6	1,067	58.0	4,325	25.6	73.4
	1954	14,582	19,092	33,674	3.3	56,363	2,770	1,194	28.6	1,143	56.9	4,155	20.0	127.2
Denver & R. G. Wn.....	1955	7,835	5,839	13,674	3.2	68,141	3,459	1,622	33.1	1,114	50.1	7,254	19.7	94.9
	1954	9,557	3,835	13,392	4.2	63,518	3,127	1,499	31.6	943	40.6	5,836	20.4	74.6
Southern Pacific.....	1955	32,243	48,240											

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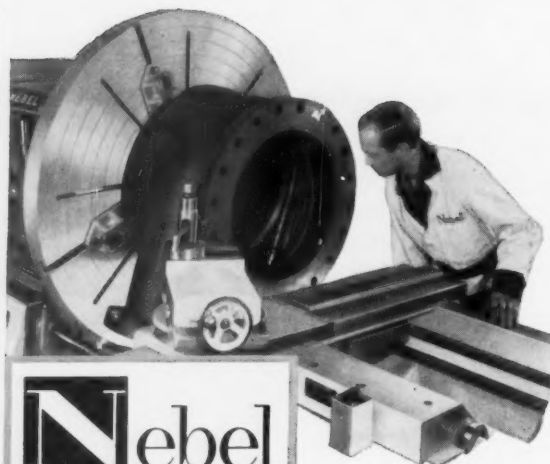
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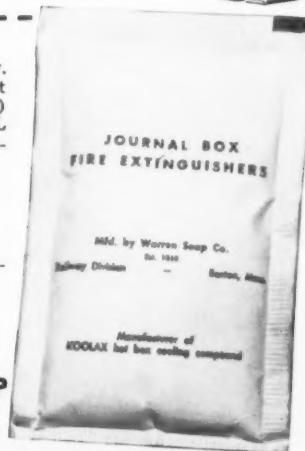
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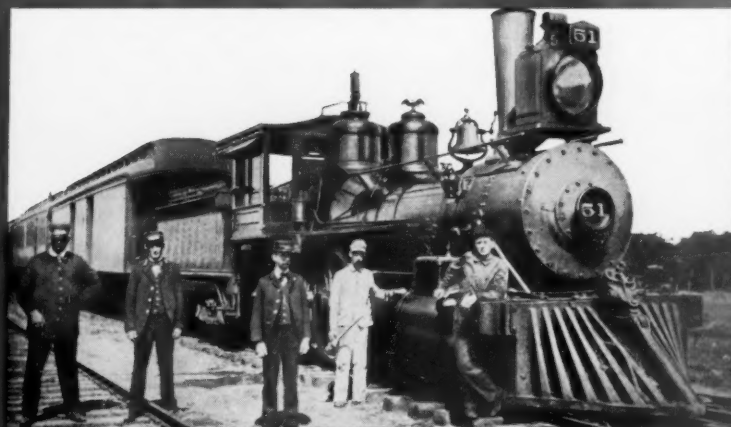
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